

THE

Desert

M A G A Z I N E



MARCH, 1945

25 CENTS



INDIANS FOUND HEALTH BY LIVING CLOSE TO NATURE

Out of an intimate acquaintance with nearly all the Indian tribes of the Southwest, George Wharton James in 1907 wrote a book which perhaps better than anything published before or since reveals the reasons for the rugged vitality of the American redskin as the first European settlers found him on this continent.

A revised edition of the book was published in 1916, but the most of these have long since disappeared from circulation.

So long as the Indian remained true to the traditions of his tribe in matters of outdoor life, work, diet and self-restraint he was immune to the ailments so common to the civilized white races—diseases of the lungs, disorders of the stomach and the nervous system and old-age disability. If later generations of Indians have fallen victim to these white man's ills, it is because he has departed from the ways of his fathers.

James' book *THE INDIANS' SECRETS OF HEALTH*, is based on the primitive way of life of the redskin. It was a good way of life from the standpoint of health because it was closely attuned to Nature. He lived close to the earth, with little artificial protection against variations in

temperature and weather and living conditions—and because this was true his adaptive functions remained active. And therein was the source of his immunity to many of the white man's ailments.

There is wide scope to James' treatment of the subject of Indian health. There are chapters on food, work, poise, sex, adolescence, parenthood, nudity, social customs, self-restraint and many other phases of Indian life. The author deals with them frankly, and even bluntly, and as an avowed advocate of the simplicity and naturalness of the Indians' approach to these questions.

"I would not have it thought," he says in his foreword, "that I commend indiscriminately everything the Indian does and is. There are scores of things about the Indian that are reprehensible and to be avoided . . . Some of their habits are repulsive . . . But because of this I do not close my eyes to the many good things of his life . . . I fully recognize the imperfections of the Indian while taking lessons from him in those things that go to make life fuller, richer, and better."

The revised edition of the book was published by The Radiant Life Press, Pasadena, California. 280 pp. Halftone illustrations \$3.25.

THERE'S DRAMA IN THE STORY OF GEMS

"Besides having a history of their own jewels have made history," said Lucile Saunders McDonald in her entrancing book *JEWELS AND GEMS*. How they made history and where they have come from makes a story that is of absorbing interest to everyone but especially to those who are really interested in gems. If there is any field in which the general public needs an education it is the history and composition of gem materials and I know of no book other than Kunz' own books, which are out of print, that so successfully presents a complete education in the subject as the McDonald book.

The story of pearls and diamonds is completely told and while all the precious stones are thoroughly discussed, brief mention is also made of nearly all the lesser varieties that have been used in jewelry. A chapter covers the 42 gem varieties that exist in the United States and reveals the fascinating facts of the discovery ranging from pearls in mussels in New Jersey to the gem mines of San Diego county, California.

Here is a book to hand your house guest who is waiting for the roast to cook or waiting for you to dress. Or it is fine for the bed stand in the guest room to relax with before going to sleep. And of course if you are a lapidary or a mineralogist it is "must" for your library. It is one of my favorite volumes.

Thomas Y. Crowell Co., New York, 1940. 288 pages, illustrated.

—LELANDE QUICK

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HEALTH AND LOVE AT A DESERT OASIS

After all, the most interesting aspect of the desert is the people who dwell on it, and this conclusion is well confirmed by the human drama enacted at an isolated waterhole on the Mojave where Willard Robertson brings a strange assortment of characters in his latest novel, *OASIS*.

Primarily, it is the story of a man and woman who came to the desert seeking health—and found both health and love. But the road they traveled was long and difficult, and there were many obstacles to be overcome before they found their happiness.

The plot is simple. It is a character study, with just enough action to keep a powerful element of suspense running through the story.

The author's presentation of the desert itself will not stand too close scrutiny, but for the most part it is as realistic a desert as one will expect to find in most fiction.

Published by J. B. Lippincott Company, 220 pp. \$2.50.

THE INDIAN'S SECRETS OF HEALTH

What the White Race May Learn from the Indian

By GEORGE WHARTON JAMES

Desert Crafts Shop has obtained a limited number of copies of this volume, which has long been out of print. These copies were printed on a fine grade of coated book paper (better than is available on the market today) and have been preserved in perfect condition. They are new books—although printed many years ago.

American Indians enjoyed rugged health because they followed close to the principles Nature has prescribed for healthful living. White Americans have gotten far away from some of these basic "musts"—and are paying the price in pain and disability and doctor's bills.

James has presented the subject bluntly—so that all may understand.

Halftone Illustrations — 280 Pages

\$3.25 Postpaid

DESERT CRAFTS SHOP — El Centro, California

DESERT Close-Ups

• George M. Bradt, whose bird stories and pictures have appeared frequently in Desert, is scheduled to leave soon for overseas duty in the infantry. He has been stationed at El Paso since early in the war. "When the war is over," Mrs. Bradt writes, "we hope to make tracks for Arizona and spend the rest of our lives there—and perhaps send you some more bird pictures." As his final contribution to Desert before leaving, George has sent in a fine series of desert bird pictures which are scheduled for the April issue of this magazine.

• Owen Thamer of La Jolla, California, wrote: "My wife and I miss Hardrock Shorty. Until Lon Garrison can resume his Hardrock yarns for Desert, perhaps we can pinch-hit for him." With his letter, Owen sent the Hardrock story which appears in Desert this month. Editors of DM think the La Jolla humorist produced an excellent Death Valley gag. We haven't been able to contact Lon Garrison for many months—and we hope Owen Thamer will continue his job of pinch-hitting.

• As the first in a series of short illustrated stories about oddities in the deserts all over the world, Jerry Laudermilk has written the story of *Welwitschia mirabilis* for April Desert. And if you wonder what manner of plant or beast carries such an atrocious name, we can only suggest that it is classified as flora, lives in southwest Africa, and more than anything else reminds you of a botanical version of that sea-going monster known as the octopus.

• Palm Wash, in the Borrego badlands of Southern California, is to be the subject of Randall Henderson's palm oasis story in the April issue of Desert. The brackish spring among the palms in this wash has been the base camp for Lost Pegleg gold searchers over a long period of years, and is well known to most of the prospectors in this area.

• Home gardeners and seedsmen never have been able to do much about the Desert Lily. It doesn't like domestic life. Elmo Proctor and a few of the desert rats have been able to transplant the bulbs—but no seed catalog lists it as a regular item. Carroll Abbott, a new contributor for Desert readers, has given some interesting slants on the nature of this "untamed lily" in a story which will appear in the April number.

March at SOUTHWEST MUSEUM Los Angeles, California

Southwest Museum announces a special exhibit of Hopi Indian arts and crafts, including paintings by Hopi artists and fine specimens of their weaving, pottery and basketry; together with a remarkable series of Kachina dolls representing the demigods and heroes of their ancient legends. Southwest Museum is situated in Highland Park, Los Angeles.



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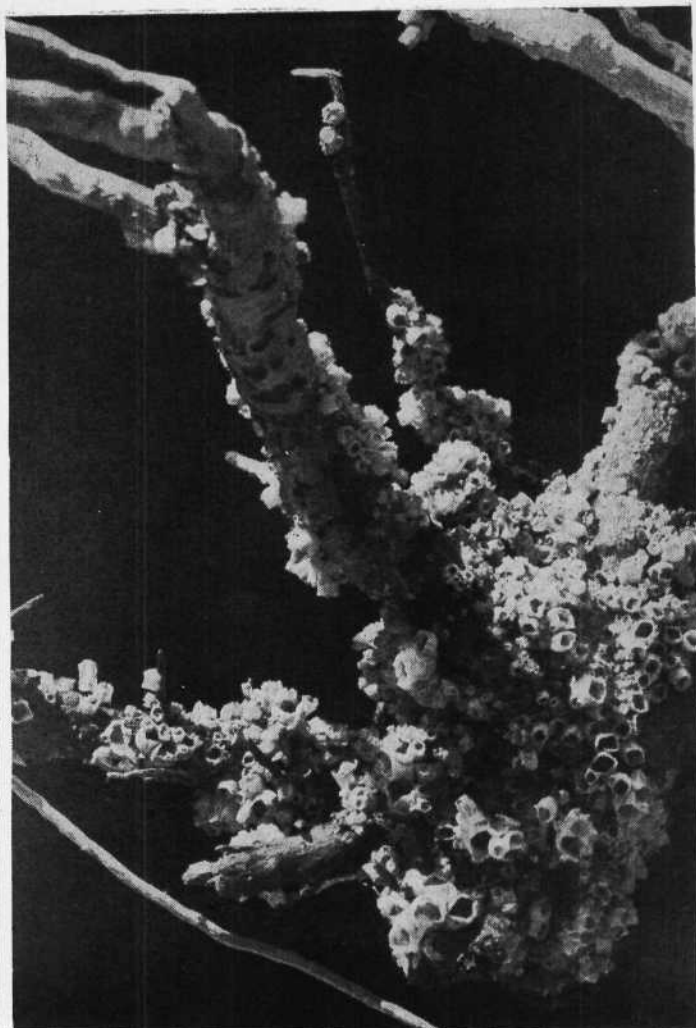
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Everything that grows or floats in Salton Sea now gathers barnacles. These dead stalks of sage and saltbush covered with barnacles had washed up on the shore.

Where Barnacles Grow on the Sage

A strange body of water is California's Salton Sea. It is a sea below sea-level. It is a salty sea in the bed of what was once a clear water lake. On its shores may be gathered wood that sinks and rocks that float. Near its southern end are little geysers of hot mud—and nearby wells produce gas that makes one of the coldest substances on earth—dry ice. And now, added to all these paradoxes is a new phenomenon. Barnacles are growing on the sage and salt bush that line its shores. Millions of barnacles suddenly have appeared where none were known two years ago. John Hilton doesn't know how they got here—but he has written a fascinating story about them.

By JOHN HILTON

THE WAR has brought strange sights to the desert. Residents were startled by their first jeep and later by convoys of them and their mechanized brethren, army trucks, command cars, that

stretched for miles. As if this wasn't enough, we were invaded by columns of noisy tanks and half tracks. Even the air overhead was filled with the roar of mighty formations of military planes.

Yes, the old-timers around here felt that they had seen about everything by the time the first armored divisions had trained in the area and the airports had gone into full swing. But the real surprise was yet to come. One sunny morning I looked out of my window to see, of all things, a large boat, traveling placidly along the highway way in front of my desert shop. It almost blocked traffic, and was convoyed by motorcycle officers. I rubbed my eyes and looked again. It was a boat all right, rolling very slowly along on the biggest trailer I had ever seen, drawn by a giant truck. The truck was heating up and it stopped in a wide spot in the road to cool off. I asked the driver where in the world he was taking a boat. He answered very curtly, "To the naval base," and went on tinkering with his engine. It didn't make sense and I finally mustered the courage to ask why they were crossing the desert in the middle of the summer to deliver a boat to San Diego. The driver turned from his work and favored me with a look of complete disgust.

"Ain't you heard there's a naval base right here on the desert?" he grunted. "And don't go askin' me why. I'm a

peaceable man but I've answered more fool questions since daylight than I've heard in 12 years in the heavy truckin' business."

We had heard vaguely that the navy was using the Salton Sea for certain training and had even seen the occasional flying boats circling over the valley. Actually most of us thought the mention of a naval base on the Salton Sea was a gag to be classed along with the report of a German sub in Lake Mead back of Boulder Dam.

It soon became apparent, however, that the Navy was definitely moving in. Other boats of various sizes trundled slowly past our door and the navy planes overhead became more frequent. The navy didn't "invade" our desert as the army had. It was a gradual infiltration.

Our neighbors the Eilers family at Date Palm Beach came in for their share of surprises. A big P. B. Y. circled one day and came to rest off the end of their pier. In a short time this was also considered a "Naval Base."

After that it wasn't an uncommon sight to see Mrs. Eilers and her daughter June bustling hurriedly about the kitchen putting that "magic coffee cake" into the oven and setting places at the table while they kept one eye on a speck of a plane droning toward them across the desert. By the time the flying boat was resting at anchor off the pier and the crew had come ashore, steaming coffee and slices of fresh hot cake were waiting for them.

Date Palm Beach had taken on a truly nautical flavor. Young officers in their natty blue uniforms wearing service ribbons from far horizons, lounged in the dining room. Flying boats came and went and small craft towing targets could be seen out on the sea. The navy had taken to the desert as naturally as a duck to water. One valley rancher who came down for a swim shook his head in wonder and remarked, "Anything can happen now. It wouldn't surprise me if barnacles started growing on the sagebrush."

The old adage about "many a true word spoken in jest" proved itself with a vengeance. One morning June noticed that a white crust was forming around the pilings at the end of the pier. She didn't pay much attention at the time but thought it odd that she hadn't noticed this before. She was away from home for awhile and when she came back, the crust had grown to a mass that looked very much like barnacles. June was skeptical about this as I had been about the first boat. In fact she didn't really believe her eyes until she had donned her bathing suit and taken a close inspection. Then like most discoverers, she met with very little enthusiasm or belief. When she mentioned them to the navy men they would take a look and say "sure, sure they're barnacles all right. So what," or words to that effect. People who knew the



The sandy shoreline at Date Palm beach is piled high with barnacles that have broken loose from piling and rocks. June Hall, in the picture, was one of the first to observe the invasion of barnacles in Salton Sea. Photo by Ted Slocum.

Salton sea from long experience were either unconcerned or refused flatly to believe that such a thing could be possible.

Attempts to introduce marine life into our desert sea some years ago, proved rather disappointing but the character of the sea is changing and will continue to do so as long as new and varying quantities of water are coming into it from the All-American Canal irrigation system.

The Salton sea is one of the most saline bodies of water in the world to support life in its higher forms. Mullet in great schools abound, also mosquito fish by the millions and the bright blue flash of the male desert migratory minnow (*Soprinadon macularis*) is seen occasionally along the shore. These are the most apparent forms of life but a microscope reveals teeming millions of smaller organisms too numerous to list here even if I had the technical knowledge necessary. This mass of microscopic life as I understand it, is both animal and vegetable and in some instances comes to that strange borderline between the two that is common in marine life.

It would be interesting indeed to discover just where all of these life forms originated. The mullet and mosquito fish probably came in with Colorado river water. The Soprinadons were natives of some of our desert springs and water courses. It is easy to understand how they were washed into the sea in flash floods. A few Colorado river salmon and carp are found around the fresh water rivers which empty into the sea but the black sea bass so carefully planted years ago does not seem to have lived.

When the barnacles were called to my attention by Miss Cecelia Faulks of Mecca I was as doubtful as others until she went out to the car and produced some twigs with small live barnacles completely covering them. The twigs were sagebrush that had been washed into the sea. Our friend's facetious prophecy had been fulfilled. I went down and talked to the Eilers and saw the barnacles for myself. June seemed particularly interested in the creatures and had kept samples of the first ones which we compared with the crop now on the pilings of the pier. Either a second species has killed out the first larger type or the original strain has become dwarfed by overcrowding, for the present barnacles are only about a fourth as large as the earlier ones. June also called my attention to the fact that the shells were lighter in color and much more fragile in the later barnacles.

She was convinced that the newcomers to the Salton sea had hitch hiked in a flying boat while Cecelia Faulks and Mrs. Eilers held the theory that they traveled on some of the boats or buoys that were hauled in from the ocean. Gus Eilers remained neutral but wished he knew a way to get rid of them. They were already multiplying so fast that a stick or board only had to be in the water a few days before a crust of minute barnacles started to form. In fact Gus said he had been so impressed by the speed with which the barnacles attached themselves that he now limited his afternoon swim to an hour, and then wondered if any had taken root on his back.

To settle this controversy, I decided to question some of the navy men and read whatever I could find on the life and loves of a barnacle. Our local librarian, Mrs. Walker must have gone a little pale when my wife called her and said that John wanted to get hold of any literature on the habits and life history of barnacles, but she rose to the occasion with a passage from the Encyclopedia Britannica. Here I learned the common barnacles are not always the stolid stationary creatures we believe them to be. In fact they have quite a fling at swimming gayly about as free swimming larvae in their early infancy. The eggs hatch inside the shell of the barnacle which is both their mother and father and then swim out into the water where they wander about for some time and often travel considerable distances. It takes a microscope to see these lively fellows, but they are interesting. When they reach the proper stage, they swim to some solid substance such as a twig or stone or the bottom of a boat and attach themselves head down by their antennae to their new home. Once cemented to this spot they are doomed to live and die there for their legs shorten and their body goes through a profound metamorphosis. A tiny shell starts to form about them. Thereafter, they must depend on microscopic life in the water about them for food and keep a constant current of water flowing in and out of their shell with a feathery organ that can be seen with the naked eye flipping in and out of their shell at regular intervals.

This short account was so interesting that I was about to look up some of the many reference books mentioned at its end and eventually become a barnacle expert. A whole new line of study opened up before me and I was about to embark on one of the many sidetracks which have kept me from being very successful in any field yet have afforded me so much pleasure that I would not have it otherwise.

I was saved from a life devoted to barnacle study, when on the following Sun-

day my visitors included Sam Hinton, formerly of the Palm Springs museum and a scientist friend who had come for the express purpose of studying the barnacles. I listened to their conversation a few moments, then realized there was no crying need for me to go into the matter. They were into it up to their ears. In fact Sam assured me soberly that they had come down this time to listen to the barnacles. I guess I looked a little dubious for he hastened to explain that his friend was studying underwater noises with the aid of delicate waterproofed microphones and amplifying devices. His friend smiled with that smile only found on the face of pure science about to embark on a long projected experiment.

"This will be one place," he remarked "where we can listen to the barnacles without having the sound waves cluttered up by the racket of a school of noisy shrimp."

I decided right then and there that my interest in Salton Sea barnacles would remain that of a layman reporting the popular facts. I would leave the scientific end of things to the scientists. They were already too many laps ahead of me.

It seems they have already gone to considerable trouble to find out just what species of barnacle has honored our desert with its presence but due to the chemical difference between ocean water and the Salton sea, the creatures have changed somewhat and it is still an open question. They agree, however, that the presence of barnacles would indicate that other forms of marine life may be adapted to our inland sea, some of which may be beneficial.

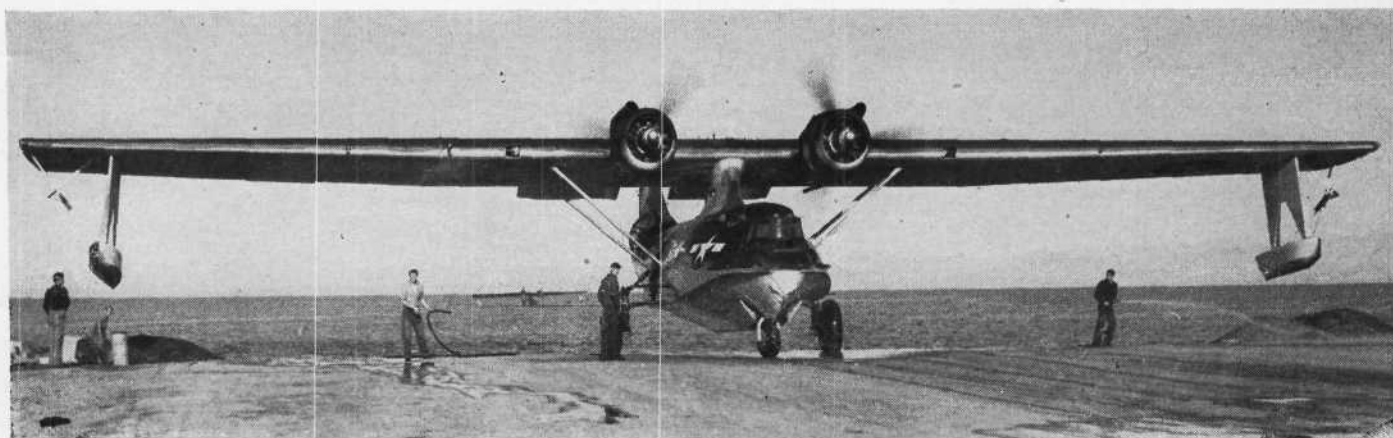
The free swimming larvae of the barnacle form an important part of the diet of many other crustaceans and mollusks. It is possible that edible clams and crabs may eventually become important items in the Salton sea. It may be only a matter of a few years before we can go for a desert clam bake. It is even possible that small life forms may feed on the baby barnacles

which in turn would furnish food for game fish from the ocean—fish that will bite a hook instead of passing it by like the vegetarian mullet.

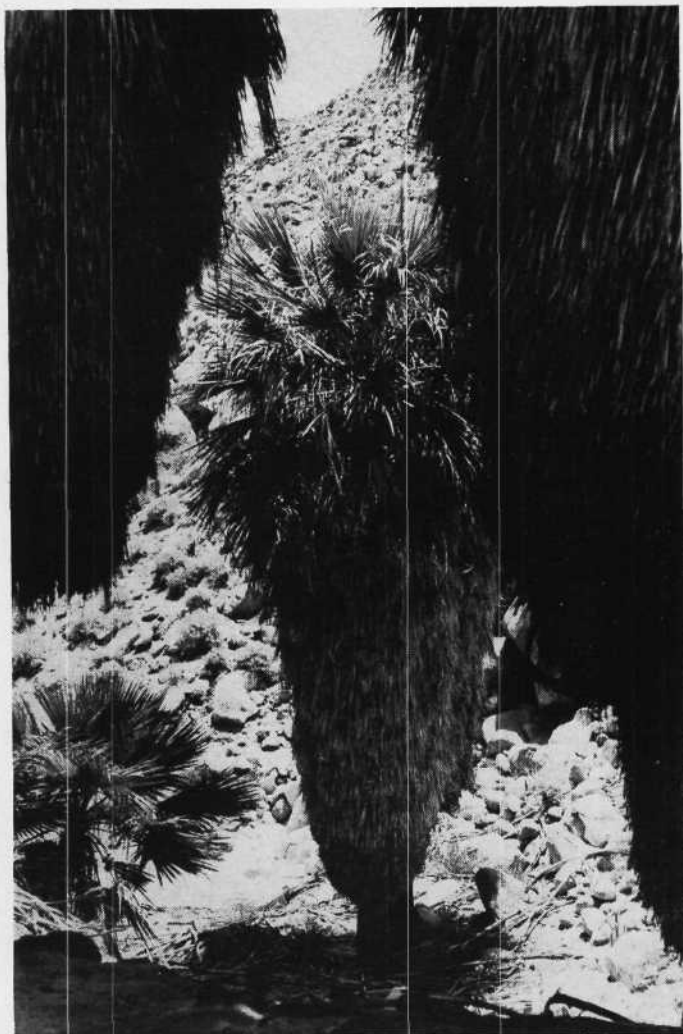
If some of these predictions come true, it will only add to the already amazing list of paradoxes concerning this strange body of water. It is a salty sea in the bed of a once fresh water lake. A sea below the level of the sea. A sea on whose shores may be gathered stones that float and wood that sinks. Near its south end live steam issues from the desert within a few hundred feet of wells which produce one of the coldest of substances, dry ice. Now we have barnacles growing on the sagebrush so it wouldn't surprise me, in years to come, to see in Desert Magazine a small department devoted to fishing hints.

The mystery as to how these barnacles came to the desert may never be solved. A young flyer the other day assured me that it is not uncommon for the P. B. Y. boats to pump their bilges in the Salton sea. This water may have come from any point in the ocean from San Diego bay to the South Sea. It seems doubtful that barnacles would have survived the long hot haul through dry desert air on the bottoms of any of the boats transported by the navy. Boats have been brought here from the ocean before, but never barnacles. There is the chance that free swimming barnacle larvae may have survived between the fibers of a wet coil of heavy rope hastily brought from San Diego but I personally like to believe that they flew in. It would fit in better with all of the other lore of the Salton sea.

Our scientist friends set up their equipment on the pier at Eilers and listened to the barnacles to their hearts content. There were no noisy shrimps or mussels to mar the perfection of the experiment, not even the murmur of a clam. But no matter how long and intently they listened, they couldn't find the answer to the puzzle of how they came here. The barnacles just wouldn't tell and I don't know that I blame them!



While no one is sure, it is suspected that the advanced guard of Salton Sea's newly acquired colony of barnacles hitch-hiked in from the Pacific in or on the navy flying craft which come to the new naval training station on the shores of the sea. Official U. S. Navy Photo.



The photographer will have a glorious field day at Mountain Palm Springs oases.

Oasis of the "Cabbage Trees"

TROOPERS in General Kearny's Army of the West were the first Anglo-Americans to discover the native palm trees which grow near Vallecito creek in the arid northeastern sector of San Diego county, California.

That was 98 years ago. The tattered soldiers were straggling through the sand and thickets of the creek bed when some of them spied green foilage against a gray hillside in the distance. When they turned aside to investigate, they found a small spring, and trees which some of them knew by name. Lieut. William H. Emory records the incident in his diary under the date of November 29, 1846. Emory wrote:

"A few miles from the spring called Oro Grande . . . several scattered objects were seen projecting against the cliffs, hailed by the Florida campaigners, some of whom were along, as old friends. They were cabbage trees, and marked the locale of a spring and small patch of grass."

Many Floridans still call them cabbage trees, or cabbage palmettos—but Californians know them as palms—the *Washingtonia filifera* of the Southern California desert.

Numbers of Desert readers are acquainted with the oasis known as Mountain Palm Springs in San Diego county, California, but many have visited this place without discovering the hiding place of a rare little forest of trees in nearby Palm Bowl. This is one of the few places on the Southern California desert where palms and elephant trees grow as neighbors.

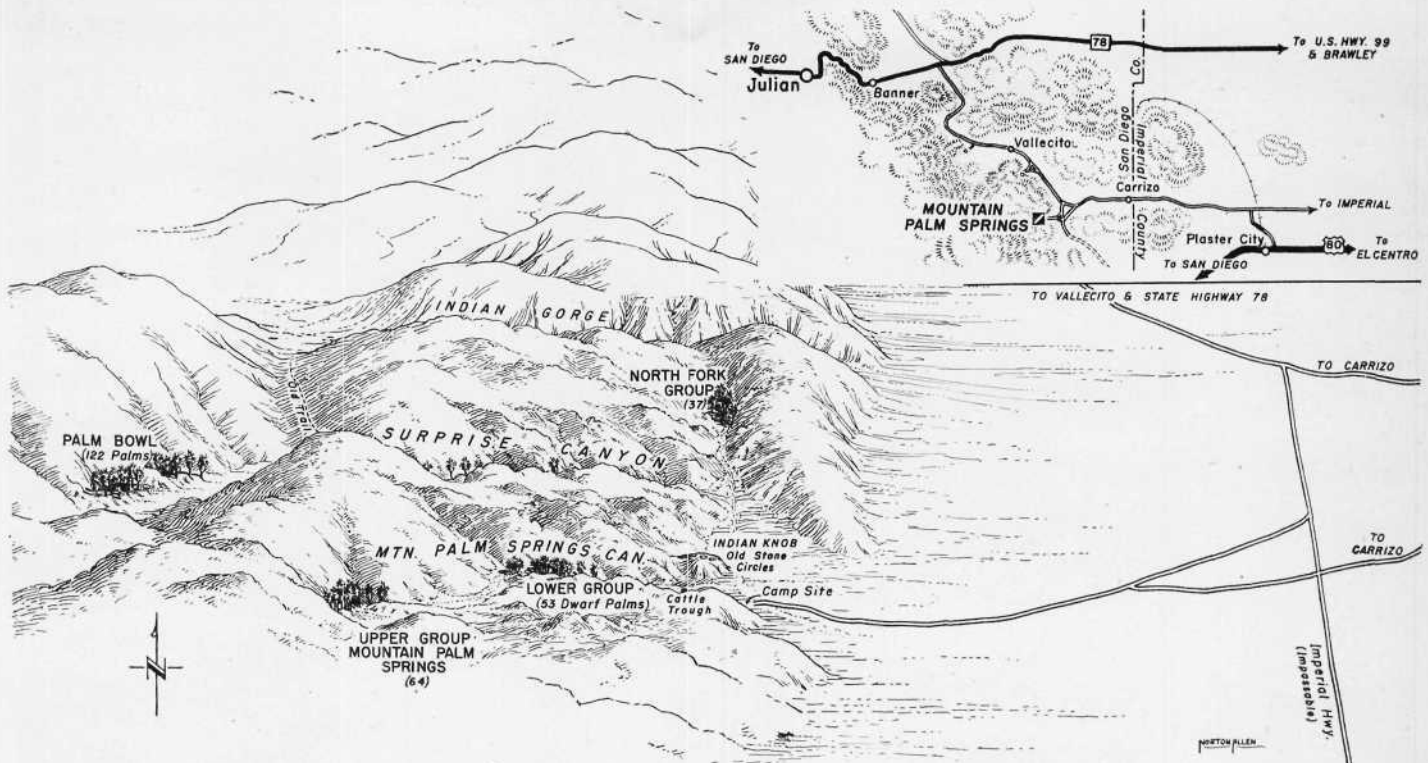
By RANDALL HENDERSON
Photographs by the author

In reading Emory's diary I have never been certain whether Kearny's soldiers saw the palms now known as Mountain Palm Springs, or a smaller oasis marked on the old maps as Palm Spring. Both groups were visible from the floor of the valley. But the trees at Vallecito's Palm spring have long since disappeared and the place is marked today only by arrowweeds and mesquite growing in a salty cienega.

The only native palms near Vallecito creek today are those at Mountain Palm Springs where there are five separate groups of trees in three tributaries of the same canyon system.

Following the old Butterfield route from the site of Carrizo stage station toward Agua Caliente, Vallecito and Warner's ranch, the foliage of the lower palms in Mountain Palm Springs canyon may be seen far off to the left, nestling in a little cove at the base of the mountains.

There is a good natural campsite at the entrance to the canyon, and since none of the palms may be reached by motor, this campground is a conveniently located base from which to explore the nearby canyons. At the point where the road ends, the



arroyo divides, the main canyon extending back into the mountains toward the west, and a tributary coming in from the north.

The ridge which divides the two canyons ends in a little butte less than 100 yards from the campsite. It is worth the effort to climb this butte, for at its summit is a series of rock circles evidently made by prehistoric Indian tribesmen. There is nothing here for souvenir hunters to carry away—just a collection of big boulders rolled into place to form rings perhaps eight or ten feet across. They may have been used as anchor stones for Indian dwellings. They may have been put there for lookouts, or forts, or the place may be a ceremonial ground. I do not know the answer, nor does any living person, although I am quite sure Malcolm Rogers of San Diego museum can make the best guess because he has been studying in this field of archeology for years.

During much of the year a trickle of water comes down Mountain Palm Springs canyon, and cattlemen whose stock range in the Vallecito valley have placed a water trough at the entrance to the gorge.

There are two groups of palms in this canyon about a half mile apart. It is not an inviting place for picnic parties for the reason that the cattle come here for shade and water.

The lower group of these palms is unique among all the oases of Southern California. They are dwarfs, and this might properly be called the pigmy oasis of the Washingtonias. For some reason, perhaps lack of water, or chemicals in the soil, their growth was stunted—and now they are mature trees with only half the stature of a normal Washingtonia. The dry fronds had been burned recently when I was there on New Year day, but they had a fine crop of seed when I saw them. There are 53 palms in the group and 64 in the oasis further up the canyon.

The third group in this area is located in the North Fork, visible from the campsite a half mile up a rocky arroyo. There are too many boulders for cattle to reach this spot, and it is a clean orderly oasis of 37 palms, young and old.

Going up the North fork, just before reaching the palms, the hiker passes a little tributary canyon coming in on the left. Most desert canyons appear rather drab and uninteresting from a distance—and this little gorge is even less inviting than a thousand other minor tributaries found in the desert mountains.

But do not ignore this little tributary because it has no glamor. This is Surprise canyon—and worthy of the name. There are 15

young palms scattered along the floor of this canyon—also much catsclaw and some scrub mesquite. But there are few boulders, and it is a pleasant 20-minute walk along the canyon until it suddenly opens into a magnificent amphitheater—and over across on the far side of the picture is one of the most charming palm oases on the American desert.

This is Palm Bowl—a little forest of trees growing so closely together as to be almost impenetrable in places.

There is no water on the surface, but the underground supply is plentiful, for the trees are green and healthy, and at least one-third of the 122 palms here are youngsters. I wouldn't guarantee that count. Counting palms in such a cluster as this is more confusing than a jigsaw puzzle.

This oasis has been preserved in all its natural beauty. These palms can be reached only by walking a mile and a quarter—and perhaps that is their best protection against the damage and destruction wrought by thoughtless campers.

An old Indian trail, still marked by broken bits of pottery, leads from the northwestern side of the bowl over a ridge into Indian gorge, a hike of not more than a half mile.

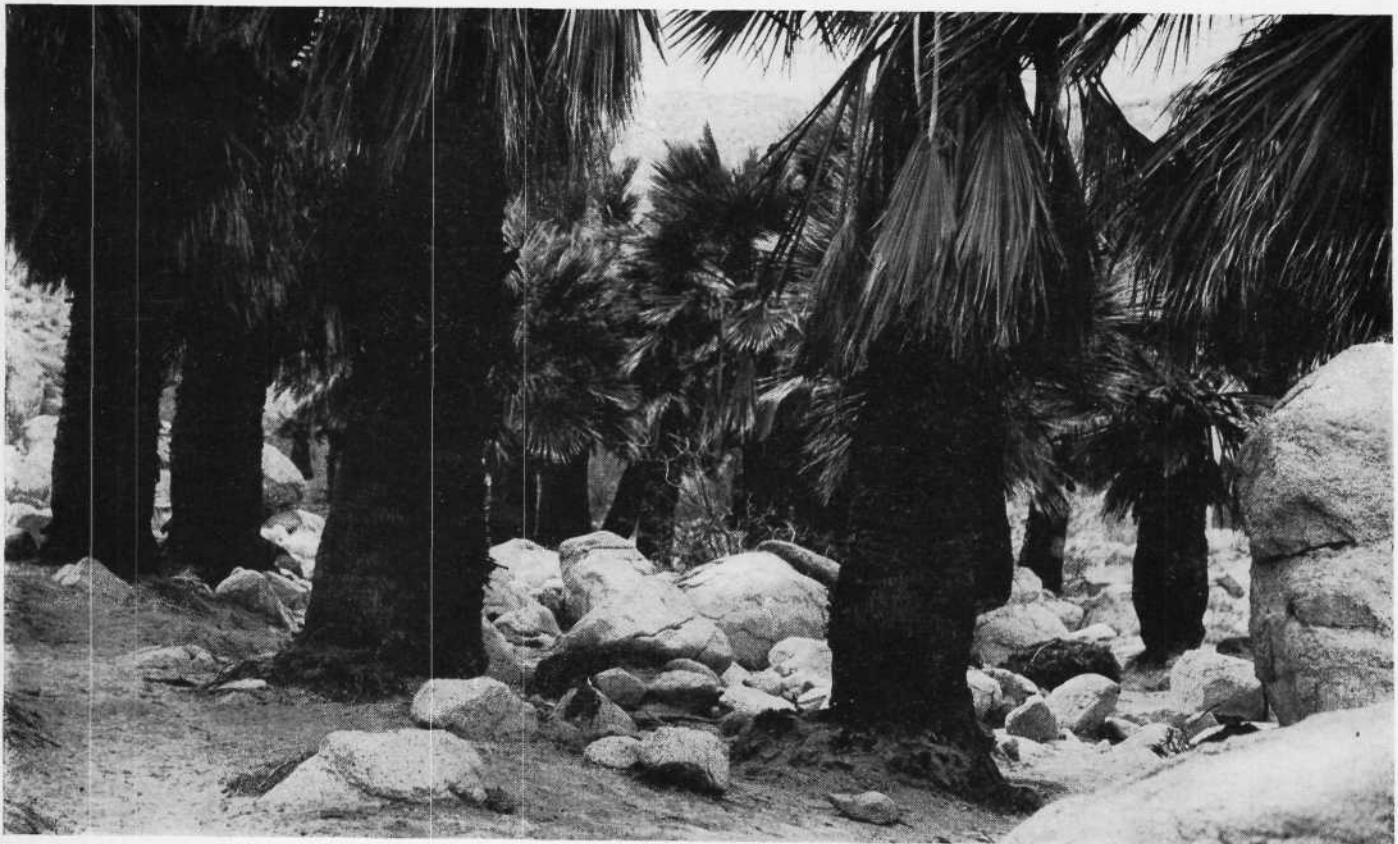
Far up on the canyon slopes in the area around Mountain Palm Springs an occasional Elephant tree may be seen. The trees are not as numerous here as in the Borrego area north of Split mountain canyon. The tall dead flower stalks of agave dot the hillsides, and along the canyon floors chuparosa was in blossom on New Year day.

Robert Crawford, who has a cattle ranch in the hills above Vallecito valley is now on full-time ranger duty for San Diego county in this area. Crawford makes his headquarters at the old Vallecito stage station and patrols the entire area as far east as the Imperial county line near the site of the Carrizo stage station. He knows every canyon and waterhole in this region, and is a friendly source of information for visitors who come this way.

Vallecito and the Mountain Palm Springs oases probably have not changed much since General Kearny and his weary army came this way 98 years ago. The "cabbage trees" are still there—"green foliage against a grey hillside" where weary travelers may come for clear sweet water and shade that is no less refreshing today than it was when Lieut. Emory and the Floridans first saw these trees.



*This picture does not do justice to the palm scene revealed
as one emerges from Surprise canyon and into the natural
amphitheater of Palm Bowl*



*These are dwarf members of the Washingtonia family
—found in lower Mountain Palm Springs Canyon. They
are mature trees, stunted at some period in their growth*

In 1857 Uncle Sam brought a herd of camels to the United States to be used for transportation across the Great American desert. The experiment failed. But it wasn't entirely the fault of the camels. They did their job and thrived on the desert vegetation of the Southwest. But they had bad dispositions and they made hideous noises—and neither man nor mule liked the smell of them. The camels are gone—and in this story Frances Watkins has recalled some of the strange incidents of their passing.

When Camels Came to the Desert

By FRANCES E. WATKINS

SAVEITA dozed comfortably on the back of her pony as he ambled along the trail. She was on her way to the trading post to dispose of corn and squash and beans she had raised in her garden, and was surrounded by a bulging load of pots and baskets.

A rhythmic clang of bells came through the warm summer dusk. She must be nearer her journey's end than she had supposed, for tame cattle seldom wandered far from the corrals.

If Saveita had been fully awake she would have known that this sound came from no ordinary cowbell. And she might have been warned by the alert cock of the pinto's ears, by his wary step as the metallic tankle came closer to the great rock which hid a turn in the dusty trail.

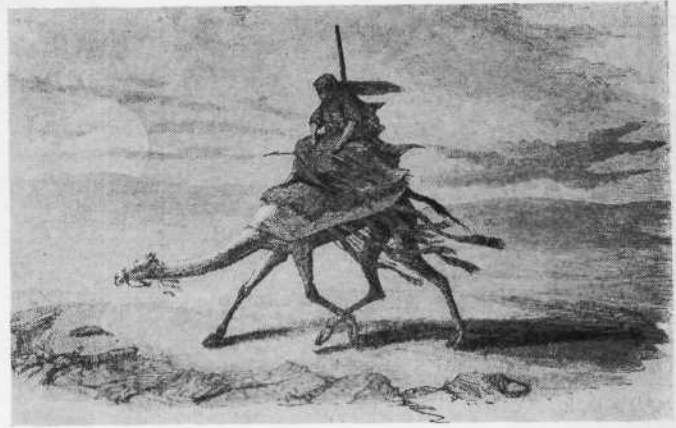
Suddenly all four of the pinto's feet left the earth in one leap. He achieved the incredible feat of reversing himself in mid-air, and disappeared in the direction of home, leaving broken pottery, baskets and vegetables scattered along the trail behind—also Savieta. The plump Pima Indian matron was very much surprised and somewhat dazed as she brushed the hair from her face and looked around.

Too startled even to scream she was still sitting on the ground when through the haze there loomed a fearsome apparition—a strangely dressed man leading such a creature as she had never dreamed. It's big head bobbed up and down at the end of a long curved neck. It had stiff awkward legs with spreading pads instead of regular feet, and, most astonishing of all, it had a great rounded hump on its back. It was followed by another and another.

Poor Savieta cowered in the dust, while the camel train, journeying by night to escape the heat of the day, passed silently on its westward way. It was dark before she summoned courage to go on to the home of her sister, near the fort. Limping, wailing, she wakened the family who roused to hear her tale of woe—of ghostly, ghostly visitants—of scattered and smashed goods. And they laughed at her! It seemed that the supernatural beasts were camels, queer beasts brought from far away to carry burdens over the desert. They were sup-



Grave of Hadji Ali (Hi Jolly) at Quartzsite, Arizona. Hadji Ali was one of the camelteers brought to United States with the animals in 1857.



This old lithograph was taken from the Senate Executive document printed in 1857 and titled "The Purchase of Camels for the Purposes of Military Transportation."

posed to live without eating and could go forever without water. They smelled like nothing on earth, and made outlandish gurgling, burbling noises, so that the horses and mules hated them and bolted whenever they came near. Strange men, who were neither Indian nor white tended the creatures. By the time Saveita's bruises were dressed and she had eaten a supper of stew and corn bread, she was somewhat calmed.

Things were brighter in the morning. The entire family went to the scene of the catastrophe, and together they salvaged most of the wares she had brought to trade at the post near the fort, although her pots were in fragments and the shelled beans sowed broadcast. She endured much good-natured teasing. If she had been content to carry her property in a *kihū*, a netted carrying frame, they told her, like her sisters and nieces, instead of perching proudly on a pony's back, this would never have happened. Then, the trader laughed so hard over her story of the tremendous beasts and their spectral leader that he gave her excellent bargains, and her oldest niece lent Savieta her *kihū* for the return trip. She returned home on her own two feet, well satisfied with her new turkey-red calico, wheaten flour and enough blue and white beads for a twenty-strand collar, in spite of aches and humiliation. There was more laughter and joking when she arrived on foot, the gay red and blue ribbons of a maiden's *kihū* fluttering about her motherly face. Indians have long memories for a joke, and Saveita knew that she would never live down this adventure.

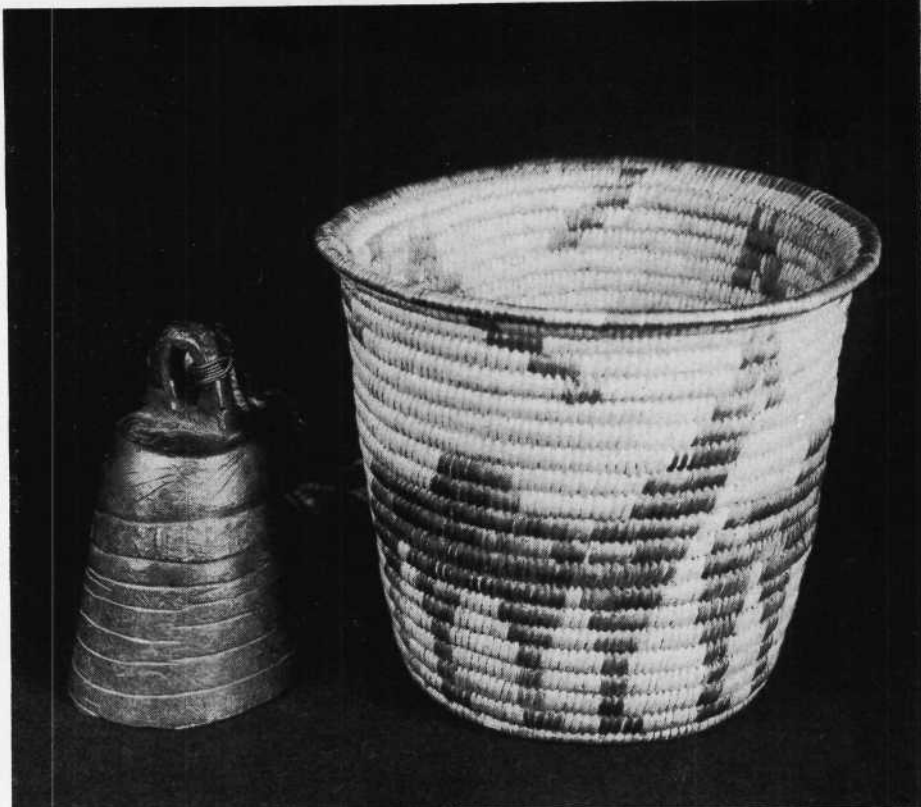
The next morning she got her willow basketry splints with black devil's claw for the pattern down from their place under the roof, and started a basket. It was a small basket, with a flat base and straight, steep sides, around which marched three chunky camels, led by an Arab cameleer. When it was finished she made another, bigger basket, with camels and Indians, and, up near the rim, a picture of herself

in her new checked dress, hands upraised in amazement.

While Saveita wove her baskets, the heavy bronze camel bells tinkled on their westward way. There were not too many settlements along the route to the Colorado River when camel transport was just another government experiment, but the course of the caravan was marked by runaway horses, frantic mules and swearing soldiers. Skeptical beholders prophesied that it would never work. Camels in America were against all nature, they said, unaware that under their feet rested the bones of vast herds of camels that had roved this region way back in the Ice Age.

It didn't work, but nature had nothing to do with it, unless it was human nature. It was just one of those unbelievably fantastic episodes in American history which Gilbert and Sullivan would have considered too bizarre as a plot for light opera. In fact, there was a sort of musical comedy atmosphere about the whole thing, and no one would have been surprised if the handsome young hero had burst into song, accompanied by a chorus of uniformed troopers, while Indians and muleteers danced across the stage and Arab camel drivers guarded their charges. All that was lacking was a heroine, and that could easily be overcome by a dark-eye seniorita coquetting at her barred window, or the golden tressed daughter of a settler, sturdily driving her father's covered wagon.

Early in the romantic fifties, while life in America was still something of a fabulous fairy tale, young Lieutenant Edward Fitzgerald Beale, stationed at Fort Yuma, proposed the use of camels for transpor-

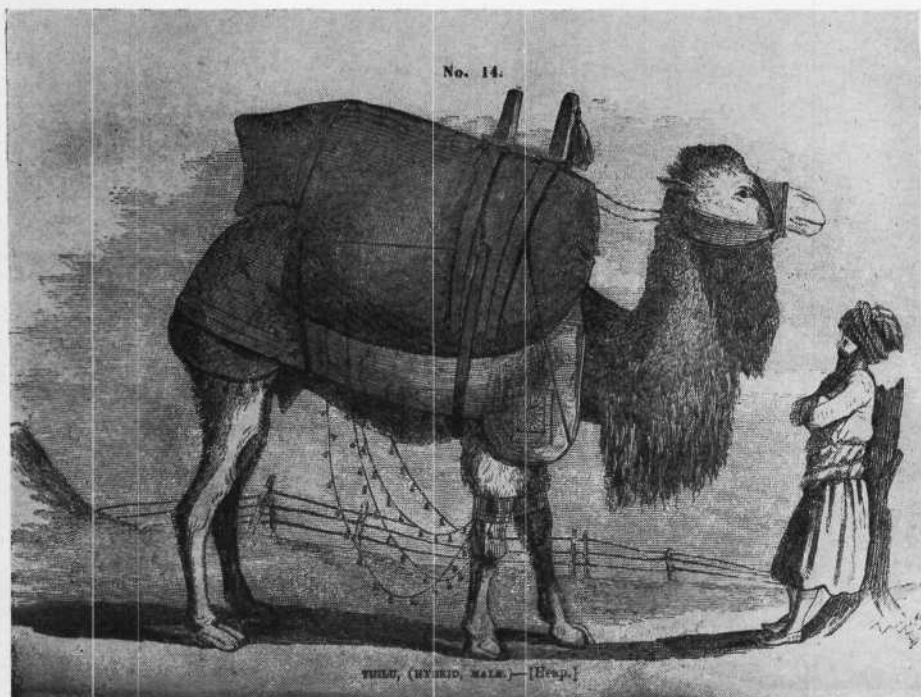


After the Pima Indians saw the camels, they made baskets picturing the strange animal. One of these baskets along with the camel bell is in possession of Southwest Museum in Los Angeles.

tation across the unknown wastes of the Great American Desert. His suggestion was received with enthusiasm by the visionary, ambitious Secretary of War, Jefferson Davis, who promptly applied for an appropriation for the purchase of cam-

els. This was in 1852, and by March, 1853, the War Department had \$30,000 at its disposal, a big sum for those days.

The first miserable, seasick camels were unloaded at Indianola, Texas, February 10, 1857. Nobody wanted them, nobody loved them, except Lieutenant Beale and their native drivers. The lieutenant, seeking a wagon road across territory recently acquired from Mexico from Fort Defiance in Arizona to the Colorado River, gateway to golden California, tried out the first camel herd, which acquitted itself to his entire satisfaction. Not, however, to the satisfaction of the cavalymen and hostlers who had to take care of the clumsy brutes, and who refused to learn how to load and tend their temperamental wards. Camels weren't horses, they weren't mules, they weren't even oxen. They did not act like any civilized animal. Besides, if you hurt a camel's feelings he pouted, and camels turned out to be touchier than the most thin-skinned spinster. They pouted when they stepped on a cactus thorn, when their humps hurt, when their loads were a few pounds too heavy, when they were hungry, and sometimes just because they felt like it. It was all very confusing, so, somehow, accidents began to happen. One or two camels at a time would break away from the picket lines, to disappear apparently without a trace. Strange to say, men who could trail a mule through impenetrable chaparral in the darkest hours of a pitch-black night, failed to track an escaping



This drawing was used in 1857 to show members of congress the huge loads the camels could carry if brought to the United States for military transportation across the desert.



Bronze camel bell from ranch of General Edward F. Beal at El Tejon, California, where some of the camels were corralled after the experiment in transportation was given up.

camel up a sandy wash at high noon. Cavalry horses stampeded or became unmanageable when stabled near the camel corrals, another count against the brutes.

However, there is little reason to doubt that the animals would have thrived with proper management and food, for they did very well even under adverse circumstances.

But events were moving fast in the United States. Romantic extravaganza and comedy were swiftly shifting to tense drama, soon to culminate in the grim tragedy of Civil War. There was little time and less inclination for experiments which

might come to nothing after all. Officers and men in charge of the camels adopted a policy of passive resistance. Unless under positive orders, the camels were supported in luxurious idleness. After some years of useless expense, the government finally sold the herds at auction. Private enterprise was scarcely more successful than the government. In 1863 a camel transportation company carried freight between Tucson, Arizona, and the seaport of San Pedro, California. Then for reasons which were never recorded, it ceased operation. A herd was taken north into Nevada to carry supplies to the mines. The only souvenir of

this venture is a law, still active on the statute books, forbidding camels the public roads during daylight hours. A few were kept by General Edward Fitzgerald Beale, the inventive lieutenant, advanced in years and military honors, who used them to haul stores for his ranch at Fort Tejon, California. There were riots and stampedes in the pueblo de Los Angeles whenever the general's outfit came to town. Finally, camels were restricted to the military reservation.

Some of the "lost" camels lived and even multiplied in the secure fastness of the Arizona desert, where, according to well-authenticated tradition, their ghosts still wander, although the last of the herd has long since joined his comrades in the happy hunting ground. No doubt Saveita and her kinsfolk enjoyed an occasional camel steak, before the last tough old hump-back was shot by a wrathful prospector whose burros had been routed by the poor lonely derelict.

At General Beale's Fort Tejon ranch, a bronze camel bell, probably one of those heard by the Indians on that first journey, was all that remained of his dream of great caravans of richly laden camels swaying across the southwestern plains. The heavy bell, with its cryptic inscription, still wired to a stiff horsehair rope, found its way into the collection of the Southwest Museum, to keep company with Saveita's basket, the record of her first glimpse of a camel.

Now, the Southwest Museum overlooks Sycamore Grove, a favored picnic ground since the first days of the pueblo de Los Angeles, in California. There, one sunny afternoon, practically all the Germans from the town had gathered for a celebration, their rigs hitched nearby. Hi Jolly (Hadj Ali?) one of the imported camel drivers, a veteran of the French army in Algiers, who did not like Germans anyway, arrived in the midst of an impassioned speech anent the glories of "der faderland." He came seated proudly in a high yellow cart to which were harnessed two bored, high-stepping camels. Sycamore Grove is a long walk from the heart of Los Angeles, even today, and it was longer in the seventies, when only "country" lay between, but that German picnic walked home, every step of the way, while its horses careened over the southern California hills, the debris of its wagons and surreys and buggies littered the valley, its beer and sausage spread as a banquet before ground squirrels and coyotes.

And by what whim of fate or law of coincidence, did the basket made by that Pima woman so long ago, come into the same haven as the camel bell, where both may be seen, mementoes of the days when transcontinental railways were as yet visioned only by idealistic lunatics?

Lonely on Ghost mountain? Not for the Marshal Souths. True they have no neighbors within easy walking distance. The mail man never comes to their door—and few visitors ever find their way up the circuitous trail which leads to the little mud home on the summit. But the Souths have plenty of company nevertheless—little creatures of the wild that live beneath the rocks and in nests in the trees and some which have even moved in and share the warmth of the house. Here is the story of one of their little companions—the story of Chitka, the pocket mouse.

Desert Refuge

By MARSHAL SOUTH

IT was on a cold evening that we first noticed Chitka. Outside in the sable twilight a raw wind yelled across the desert, trampling up the ridges of Ghost Mountain and threshing the tall, dead poles of last year's mesquites this way and that against the hesitant stars. Inside the house the red flames from a piled cone of dry agave butts swirled in the big fireplace and the kerosene lamp, turned low, filled the kitchen with comfortable shadows. Supper was over and the table cleared. The curtain over the archway had been pulled into place to keep out the chilly draughts and we had all settled cosily on the floor before the blaze to enjoy the warmth. And there, suddenly was Chitka.

As silently and mysteriously as a fragment of shadow he came into the fireglow and paused, right among us. His long tail with its tufted tip lay on the warm flagstones. His tiny, wistful eyes peered into the mystery of the dancing flames as if fascinated. "Ooooh!" said Victoria, drawing a soft breath. "The ghost of our Andy mouse has come back."

"Shish!" Rudyard whispered, "You'll frighten it."

But the tiny grey shape was gone, and so swiftly that we did not see its going. "There!" Rudyard chided angrily. "I told you! You've frightened the life out of him!"

"But I don't think so," Victoria said confidently. "He knows us. It's Andy. He didn't like staying dead. He wanted to get back to us. So he jus' got himself re-borned. He's not afraid of us." She wrinkled up her pudgy nose, peering here and there into the shadows.

"If it's Andy," said Rider, "he's changed his nationality. Andy, you may remember, was a white-footed mouse. This one is a spiny pocket mouse."

"Which wouldn't necessawily make any diffwence," snorted Rudyard, bristling instantly against this implication of superiority. "Don't you wealize that there is such a thing as pwo-gwession? If you don't, I'm sowwy for you. Anyway his name isn't Andy now. It's Chitka."

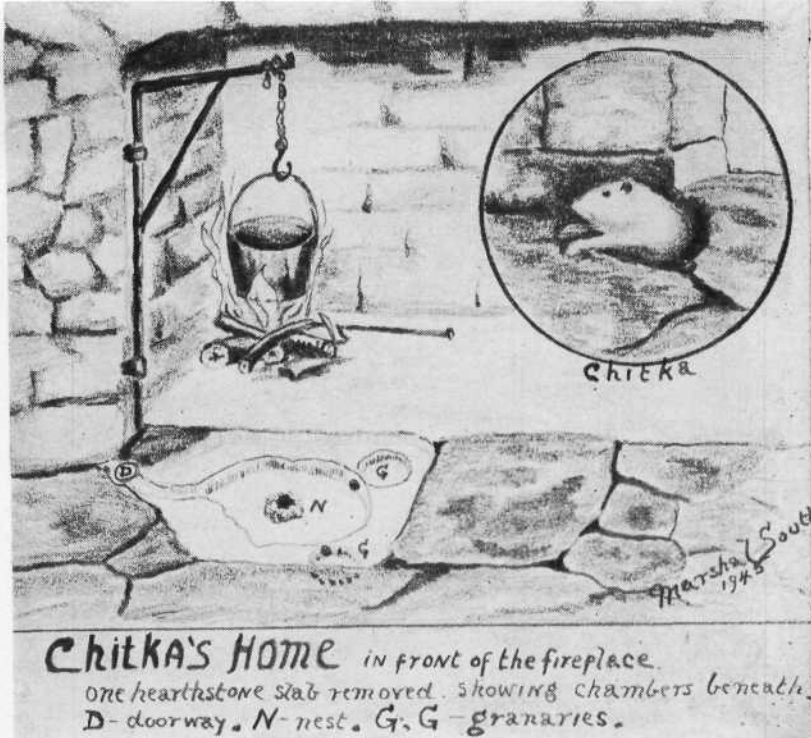
"Ho!" said Rider with heavy drama. "Ho! So that's it. How do you know?"

"Because!" Rudyard said stubbornly. "Jus' because it is." He possessed himself thoughtfully of a nice hefty club of firewood.

"Stop it!" Tanya said sharply, suddenly alive to the gathering tension. "Rudyard, put down that weapon. And Rider, you don't have to be so critical. I will not have any argument here. If Rudyard says the name is Chitka, then it shall be Chitka."

"And a vewwy good name, too, I fink," Victoria wrinkled her nose at Rider in a triumphant grimace. "You were twying to stir up a wow," she added sweetly.

But there was no row. For just about that time Chitka came back. Came back and sat down companionably on a warm bit of hearthstone just at the side of the fireplace. He was a cute little fellow. But somehow he seemed a trifle wistful and lonely.



Chitka's Home in front of the fireplace.
one hearthstone slab removed, showing chambers beneath.
D-doorway. N-nest. G-G-granaries.

We wondered how he had gotten into the house. The white footed mice go and come at pleasure, utilizing the many holes up under the roof beams, which Yaquitepec's hit and miss construction affords them. But the pocket mice are different. Of the aristocracy, they are retiring and perfect mannered. They mind their own business and do not go skittering up walls and through cracks like a pack of brigands. It was strange that Chitka had come into the house. And stranger still that he stayed.

But stay he did. And become more and more a part of the family circle. We came half way to believing Victoria's theory that he was the reincarnated spirit of our old friend Andy, who, months before had met death in battle against overwhelming odds in the bottom of a dry water cistern. At any rate Chitka was one of us. Every evening he was part of the circle about the fire. Like a little grey elf he came and went between our feet, pausing to blink into the fire and then slipping away to hunt for crumbs beneath the table.

We never saw him in the daytime. And his hideout was a mystery. One morning, however, Victoria, up early, discovered a hollow in the earth in a chink between two irregular hearthstones. "Chitka is digging himself a hole," she reported.

But there didn't seem to be much of a hole. Just a little hollow place. Rudyard filled it up with some fresh earth. But next morning it had been cleaned out. We pushed exploratory fingers into the depression. But it was only about an inch and a half deep. Just a play hole, we concluded. A mouse was entitled to some amusement. So we forgot about the matter. Chitka came and went happily in the evenings. But he was having his troubles too. For one night we noticed that he had lost at least half of his tail. The slender tip and the graceful paintbrush tuft had been nipped off. Evidently the battling mantle of Andy had fallen upon him also.

At length there came a morning when, clearing the ashes out of the fireplace, I noticed that there was a lot of earth among them. Mice tunneling under the wall, I concluded. Trying maybe to get into the storehouse. I had forgotten about Chitka. By way of investigation I rooted up a big flagstone in front of the fireplace.

There was Chitka's home. Even as the stone heaved up, exposing its guarded secret to the pitiless light of day, I realized what I had done. And it needed not the anguished exclamations of Rudyard and Victoria to whelm me with swift contrition. This was Chitka's home. This was the house he had been building so long and so industriously beneath the big flagstone. This was the meaning of that little hollow—the tiny doorway which each morning, before daybreak, he so artfully plugged up with earth. This was the meaning of the mysterious accumulation of

earth in the fireplace. Chitka's home. A home built with love and with forethought and with patience and with art—for the cup shaped nest which, like a four poster bed, occupied the center of the spacious little chamber, was composed of gaily colored tissue paper which had once been the wrapping of Christmas packages. Here was his spacious hall. His bed. His living room and his adjoining store chambers. Here also was Chitka himself, frantic, dazed by the sudden inflood of light to his secret dwelling. From a side store chamber his eyes peered at us, his whiskered nose twitched nervously. "Oh daddy, cover him up again! Don't frighten him!" Rudyard cried. "Please! Quick! Poor Chitka!"

So we carefully replaced the roof of Chitka's underground palace. We set the flagstones back into their places as before, being sure to leave the chink between them so that the artful little doorway would still serve its purpose. And we went out and got fresh earth and filled the gaps between the stones as neatly as we could. The doorway was still open. We did not dare to pour earth down that for fear of filling up all Chitka's underground domain. But it did not remain open long. For even as we worked Victoria clapped her hands joyfully. "He's still there," she exclaimed, "I see his nose peeping out."

But she didn't see it again. For the next moment, in place of the nose, there came from below a little surge of loose earth. And then another, and another. The doorway chink was filled and once more took on its innocent look. Away downstairs Chitka was busy with nose and paws stuffing up his passageway.

So Chitka—whom Victoria still insists is Andy, in new guise—dwells on in his little house beneath the hearthstones of the gods. Nightly he comes forth to gather his share of crumbs and tid-bits and to marvel at the astounding miracle of the fire. He has become tamer than before, and more sociable. It may be that his little heart has taken new courage and his philosophy of life has been established more fully. For did he not pass unscathed through the Great Disaster—through the day when the solid earth was torn asunder and the great light shone and the voices spoke in thunder. Through all this has he passed. And he lives, and even the gaudy bed of Christmas paper remains unharmed. What mouse could ask more proof of the miraculous or of the fact that life is lived in the shadow of unguessed powers of mercy and understanding.

The pocket mice are a lovable breed. There are a good many varieties of them. And it has always seemed to me they are among the most attractive of the many different types of creatures which make the desert their home. Though fairly numerous in some localities they are not as numerous as the white-footed mice. They are generally more shy. And even in those districts where they are plentiful their cautious habits are such that one can dwell in a locality for a long time without being aware of their presence.

When first we came to Ghost Mountain there were quite a number of them resident about the place where we built our house. And, perhaps due to the fact that Ghost Mountain was an unspoiled wilderness, they were remarkably confident and trustful. Every evening they would come about the tent and the first unfinished shack, skipping nimbly here and there in their odd, nervous manner of movement, as they searched for scraps and scattered grains of wheat and corn that had been dropped at our meal grinding. With their long tufted tails, their excited long jumps and their amusing manner of stuffing their cheek pockets with the loot they found around our campfire, they always provided us with evening entertainment.

Deliberately we set out to win their confidence. And, after a while, they trusted us completely. They would come and take wheat grains from our hands, stuffing their cheeks greedily until they would hold no more. Then off they would run and cache the load in hastily dug holes and hiding places and come racing back for more. Often they forgot these little treasure troves, which next season's rain would reveal in the shape of green shoots of thickly clustered wheat. They became so tame that,

with a little coaxing, they would run up on our shoulders. I think that much of the charm of those first months on Ghost Mountain was due to the antics and gentle trustfulness of these little desert sprites.

That grand old scientist the late Frank Stephens of San Diego, once had a pocket mouse as a pet. It stayed with him contentedly for five years. And during all that time, and up to its death, is consistently refused to drink water. Nor would it eat green food or roots of any kind. Its favorite food was dry grain—wheat or barley. And its home was a small box with an inch or so of sand in the bottom, which Mr. Stephens kept in a perfectly dry place in the corner of the hall. He provided it with some cotton, of which the mouse fashioned itself a snug, ball shaped nest. How the little creature could exist on dry food without moisture Mr. Stephens confessed was a mystery to him. Yet the fact stands. It would not drink.

Enough, though, for the present, about desert mice. All this talk about pets, however, brings back to mind several loose ends which might have been floating around a long while untied. These are matters which concern Rhett and Scarlet, the two burros and Juanita and Conchita and Betty, the goats. All of these good animal friends, who were at one time part of our household here at Ghost Mountain, have aroused much interest. And this seems a good time to answer the many letters of inquiry that have come to us concerning their fate.

Well, Rhett and Scarlet have been retired to a sort of earthly burro paradise on the desert edge estate of good friends who played the part of good Samaritans to the burros during our absence. Their mission in life is now purely decorative. And in place of the bleak cholla cacti of Ghost Mountain—which I have seen them eating without either false teeth or gloves—they now feast upon watermelons and other choice garden tid-bits. When we returned from our ramblings our friends met us. "We have your wandering burros," they said. "They were loose in the scenery, so we offered them temporary hospitality. When do you wish to take them?"

"Keep them," we answered. "Keep them. From henceforth they are yours. Your springs are a more dependable source of water than our cisterns." Yes, Rhett and Scarlet have cast anchor in a snug harbor.

To a snug harbor also came Juanita and Conchita, the two Ghost Mountain goats, and Betty, Conchita's daughter. We found for them a good home in Utah where, under the shadow of the red sandstone cliffs, they now dine upon alfalfa hay and rolled barley, and look back, as upon some fearsome nightmare, at the memory of their many weeks of bumping over desert roads in the narrow confines of a tiny trailer. So they, too, are provided for.

So now, at last, all the loose ends are tied, and the questions answered. And I find, as I look up, that the day has waned. A chill mist veil has wafted in across the low sun and the rocks and junipers are turning blue with the promise of a grey evening. The little lizard who has hung around my typewriter for most of the afternoon, speculating on the chances of stray flies, has decided to call it a day, and has gone home.

And I think I shall follow his example. But there is a cheerful thought to end on. For soon, now—not so very far ahead in the future—the wild geese will be winging north again over Yaquitepec. Soon—soon again—it will be spring.

DEPTHS

*Dig in the soul. Dig in the fertile soil,
Where deep roots grow.
The shallow surface and its vast turmoil
May food bestow.
But roots of Life within deep depths all burrow,
Through grief and grime,
And through a realm of weeping and of sorrow
Come dreams sublime.*

—Tanya South

LETTERS

Too Much Gold . . .

Mesa Grande, California

Dear Mr. Henderson:

We got quite a kick out of Hugh Rankin's story about the two ollas of gold in "Treasure canyon" near Vallecito. In the first place, no large olla could be lifted if full of gold. And second, it would break if one tried to lift it. And no horse could carry two of them and a man beside.

RALPH E. BUSHNELL

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From Rider, Rudyard and Victoria . . .

Ghost Mountain, California

Dear Mr. Henderson:

Will you please convey to Mr. T. E. Mayberry our sincere thanks for "Mojave" the big desert tortoise which, through you, he sent us.

We are all delighted with Mojave. And we think he will like his new home here on Ghost Mountain. We have tucked him up to sleep in a nice warm place near our other three tortoises, and we believe that when he wakes up he will be contented and happy. The grass is growing and there promises to be lots of nice tortoise pasture for Spring.

Again with thanks to Mr. Mayberry, and with deep appreciation to you for the trip to Ghost Mountain in order to bring Mojave to us.

RIDER SOUTH
RUDYARD SOUTH
VICTORIA SOUTH

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Paging the Man

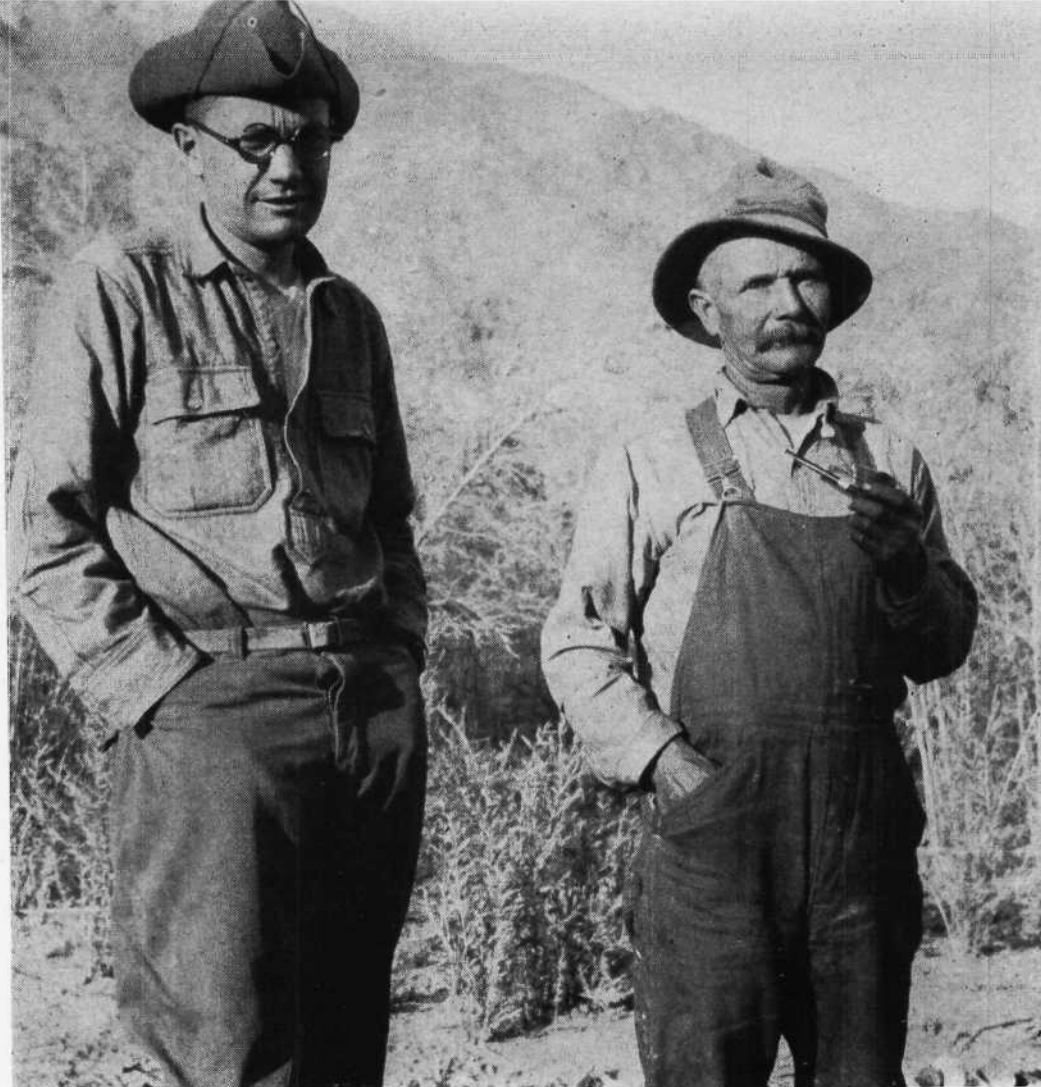
Who Licked the Rocks . . .

Kahoka, Missouri

Dear Desert:

Several years ago on our last trip to the west coast, we stopped a few days with the Cokes on Calico mountain. One day while looking through their stock of mineral specimens in their out door patio, I met a gentleman who attempted to assist me in identifying the different rocks. In his kindly efforts to do so, he would drag each rock across his tongue and hold it up for me to get perhaps the polished effect. In so doing he was helping the Cokes and myself, but in my own frank manner I undoubtedly showed my dislike for 'licking'. This gentleman noticed my attitude and remarked: "Lady, you'll never be a rockhound until you've licked every rock on Calico mountain". I have thought of that remark many times and would like to contact this gentleman. I believe he lived in Yermo and worked at the Round house or for the railroad. Mr. O'Bleness and I have a specimen from our own area near here for this man when ever we hear from him. Thanks,

MRS. M. L. O'BLENESS



Dr. Philip A. Munz, now director of the University Herbarium at Cornell (left) and Gus Lederer. Photo taken by Don Meadows at Corn Springs in 1922.

When Gus Lederer was Mayor of Corn Springs . . .

Long Beach, California

Dear Mr. Henderson:

Your delightful article, "Oasis in the Chuckawallas" in the January issue of Desert Magazine evoked pleasant memories of the place. In April 1922 Dr. Munz of Pomona College, French Gilman of Banning, Bob Harwood (now Doctor Harwood of San Diego State College) and I drove an old Overland "90" from Steve Ragsdale's new establishment at Desert Center to the mesa on the southeast of Corn Springs. Rains of the previous winter had washed out the road in the Corn Springs barranca and we had to drive across the piedregal on the east to get near the springs. We spent a week in a dry camp about a mile from the palms while we collected plants and insects for the college collections. My field notes of the jornada contain a number of things about Corn Springs and August Lederer which may be of value in the desert record.

When we visited the Springs Gus was living alone in a little two roomed cabin, facing east, about 60 feet south of the main spring. The cabin was scrupulously clean, yet was a man's home. A half dozen guns were on the walls and prospecting

gear was evident. Gus was fond of his guns, though he admitted he seldom killed anything. There were two cabins at the springs in 1922. The newer one had been built and was occupied by Lederer, the other was a short distance down the canyon and was open to the public. On the wall of this older cabin was a large sheet of paper headed "Corn Springs Register." There were perhaps fifty names on the register, mostly those of prospectors. Gus took great pride in Corn Springs and did everything possible to make it attractive. He had a shower bath in the nearby willows, and a vegetable garden which produced far in excess of his own needs, both "for you and other right people" he said.

August Lederer was a little fellow, only five feet six inches tall and weighed 120 pounds. He was born in Idaho in 1868. He had only two years of formal education, but his father, a well educated German, gave him a broad foundation in Latin, Greek, literature and history. Gus's education was sufficient to admit him to the Colorado School of Mines, but he never graduated. The lure of a big strike was stronger than book learning. He went to Corn Springs in 1917.

When our day's work was done we would sit on the porch of the Lederer cabin

and listen to Gus philosophize and discuss desert lore. He talked of burros, prospecting, mountain sheep, dykes, dry placers, city people, ambition, cats (his particular pet was a large black and white one which he called Tommy Jones), education, mosquitoes, politics and stars. He told the story of the Peg-leg Smith mine, but was mum on certain details. All of which fill several pages in my field notes.

DON MEADOWS

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When Self-interest Becomes Selfish Interest . . .

Twenty Nine Palms, California
Dear Sir:

I have just read your reference to the Jackson Hole National Monument in the February issue of *Desert*.

It is regrettable that so much misinformation about the Jackson Hole country is volunteered to the public by people who are totally ignorant of the facts.

Why don't you folks petition the President to create a national monument of your Barbara Worth hotel, including 221,610 acres of your lettuce and vegetable fields? The hotel has historical significance for it was named for the heroine in the popular novel "The Winning of Barbara Worth." You might also include the Salton sea for it should be "preserved and protected for future generations." It would be just as sensible to create such a monument in your front yard, "for the benefit of all of the people of the United States" as to create a monument of Jackson Hole. It would be comparable also to include in your monument your "All American Canal," for the President included Jackson Lake, an irrigation project which waters all of southern Idaho, in his proclamation creating the Jackson Hole monument.

Quoting from your article: "Virtually every national park and monument in the United States was established in the face of opposition." True enough, but you should have said more—the real opposition comes from the general public who are opposed to the commercialization of such areas. National parks and monuments are usually promoted by a bunch of ambitious people who first have the concession privileges tied up and in their vest pocket. For instance:

August 25, 1927, Snake River Land Co., incorporated (Rockefeller Corp.).

February 1929, Teton National Park created by Congress.

December 20, 1929, Teton Lodge Co., incorporated.

December 24, 1929, Teton Transportation Co., incorporated.

January 3, 1930, Teton Investment Co., incorporated.

Teton Boat Company.

The incorporators of these concerns, of-

ficers and directors, are practically all the same men and are friends and associates of Horace M. Albright and Rockefeller. They began operations immediately in Jackson Hole and are yet continuing their business, except the Snake River Land Co. which has been dissolved. This is the real motive and what is behind the overworked phrase "to preserve and protect the Jackson Hole National Monument for all of the people."

We welcome the wise men to come to Jackson Hole and show us natives some of the "Antiquities and objects of historical and scientific interest" which are alleged to be within the monument.

Last summer, a guest at my ranch said to me, "Any time you are told that National Parks and monuments are not created for the benefit of a few to commercialize, somebody has told you a d-m lie."

A. W. GABBEY

Dear Mr. Gabbey: Some of us desert folks like to spend a few days or weeks in such cool restful areas as the Jackson Hole country—just as you like to come south to our warm climate in winter. And since we cannot all afford the luxury of your beautiful Square G Ranch at Jenny Lake, we are grateful that our government has made possible the free camp grounds and such accommodations and services as are provided by the Teton Lodge company and the Teton Boat company.

We still live under a democracy that favors private enterprise, and it is only proper that these concessions be let to private business organizations operating under the control of the National Park service.

We have provided the Joshua Tree National monument for your winter recreation and enjoyment. Why not let us have the same opportunity for summer recreation in your refreshing Jackson Hole region?—R.H.

• • •

Talking Crow of the Nevada Desert

Beatty, Nevada

Dear Mr. Editor:

Late one summer afternoon I was sitting in my small garden which consists mostly of morning glories—a most grateful plant that does not need much attention to give abundant flowers.

Just before sunset I saw a crow approaching, apparently without fear of the dogs lying around me in a circle. The bird appeared to be traveling with great difficulty, alternately hopping and trying to fly. As it neared me it would stop and close its eyes, seemingly from exhaustion.

I picked up the bird and took it into the house where by lamp light I found a hair

spring steel wire around its right wing, making it impossible to open the wing.

A large cage was provided to care for the bird while it was recovering. Days passed and at meal time I fed the bird chopped meat and fruit, always saying "hello" when I did so. One morning to my surprise the crow gave an answering hello, just like a parrot.

Other crows often came around the house and seemed to be calling to the one inside. Not wishing to break up a home or romance I opened the cage to release my guest. But it did not want to leave. When I took it outside it would remain awhile and then before dark, would return. It began building a nest of heavy sticks.

The bird is a good pal. It always gives warning when strangers come. And now the bird has acquired two words. Sometimes when I say hello, it replies "hello yourself."

S. PASTOR

• • •

Both Names Are Correct . . .

Glendale, California

Gentlemen:

Your attention is called to the February issue. Under "Desert Quiz" question 16 you say that the river running thru Zion Park is the "Virgin." I believe you will find that the name of the river should be "Mukuntuweap."

E. O. KEPLER

Dear Mr. Kepler: You are right—and so was Desert Magazine. The facts as quoted in the Utah book of the American Guide series, are as follows: "In 1872 Major Wesley Powell visited the canyon (Zion) and applied the Indian names, Mukuntuweap to the north fork of the Virgin river and Parunuweap to the east fork." Today, three different names are used in referring to the canyon, Virgin, North Fork and Mukuntuweap.—R.H.

• • •

Sea-faring Desert Rat . . .

Tulare, California

Dear Sirs:

I want to add a few lines telling you of the joy and pleasure we derive from such a grand magazine. Seems strange that a man who has followed the sea-faring life for 38 years should dearly love the desert. We own a little cabin at Aztec Wells and know the Ragsdale family and Scotty Byron the prospector who passed away in December—a grand old character who suffered much to die in his desert.

How grand it is to be able to feel the very heavenly quietness in the speechless surrounding of our desert. We are grateful to have such a book as DM to keep us in touch with those divine things of the desert.

MAUDE AND WM. C. SEIDEL



"That old ghost town in the heart of the sand." Photo by Ernest C. Peterson.

THE LORD'S BACK YARD

By EMMA B. DAGGETT
Big Bear Lake, California

When the Lord made the trees and the flowers
To plant in His garden below,
The Lily, the Rose and the Lilac
The Daisy and the Golden-glow,
There were a lot of pieces left over,
Little scraps of red, green and blue
And all the colors of the rainbow
Were left when the Master was through.
He took them to the back of His Mansion
And threw them out into the yard
Which was just a wind-swept desert,
Bleak and barren and scarred.
Where ever each tiny piece landed
It took root. And now it grows
With the myriad of other pieces
To make the desert bloom like the Rose.
Near the end of the year they all vanish
And are hidden away for awhile.
But when warmed by the early spring sunshine,
They lift their faces toward Heaven and smile.

FIDELITY

By MYRON B. NORTON
Alamogordo, New Mexico

I know a place where lizards play
On sun-warmed stones at high midday,
Where silence reigns and peace descends
To bless us as we pause.

A mountain oak gives welcome shade,
And tiny acorns lay arrayed
Like gem stones set in pattern
Light upon the sand.

A wren disturbed scolds lazily,
A chaparral struts brazenly
With flip of tail aloft
And grudgingly gives way.

Oh, give me things like these dear Lord,
And let my thoughts with Thee accord.
When Creation's seeds complete were sown
You kept the Desert for our own.

Desert Ghost

By LOUISE MONRO
Pasadena, California

The desert is desolate, dreary and dry,
And the sun hangs high in a breathless sky;
It's torturous rays beat cruelly down
On the dusty streets of a parched little town.

A town whose streets are always bare,
Where the hush of death still hangs in the air.
For the hearts are gone, and hope is cold
For the lust of the shining desert gold.

A broken olla still swings from a thong
On the porch of a house that is lacking a song.
The hinge on the door is rusted tight,
And stars shine through the roof at night.

A graveyard stands on the outskirts of town,
With its paint peeled fence that never fell down,
And wooden tombstones, with names weathered
high,
Silhouetted stand against the sky.

Of the road once well trod, there remains but
a trail
So hard to follow that most people fail.
'Tis a sad and quiet and lonely land.
That old Ghost Town in the heart of the sand.

LET THERE BE RAIN

By LELA M. WILLHITE
Salinas, California

Let there be rain for each thirsty blade
That grows upon the sloping hill
And sunshine across the dew kissed glade,
And flowers on the broad window sill.

Let there be rain for the desert sand,
Barren and sterile of life,
That it may blossom like another land
And contribute beauty to banish strife.

Let there be rain on the fields in Spring
That the sower may harvest his grain
And to the dweller in cities its goodness bring.
Oh, gods of drought, let there be rain!

CHAPARRAL, PFC.

By GRACE P. HARMON
Los Angeles, California

High be our pride!
Now—now we, too, may give
Our land—our life—
That Liberty may live
Within the boundaries of our Nation wide!

Sky-blue our reach
And desert-wide our scope!
Within these gaugeless miles we see strange
sights:
Frail gliders drift and soar; sharp fingers probe
our nights;
Across the chaparral
Grim monsters warp their rumbling ways:
To right! To left! Straight on! Shrill, hideous
days!

We are bereft of life!
We help to save a World!

What rue it, then, that we are ruthless mowed,
That clanking hordes roll over us and bring
Unwonted clamor to our desert realm!

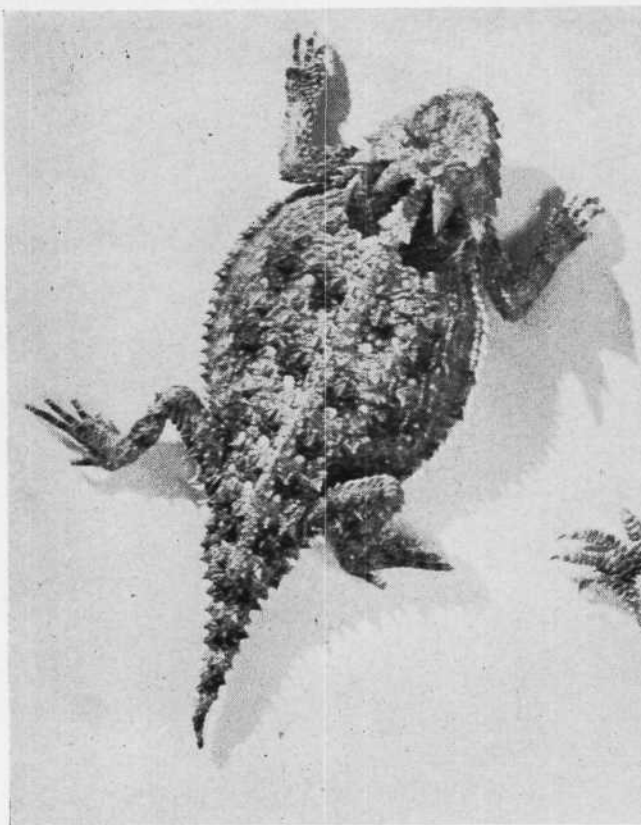
We serve! We proudly wear
The campaign colors Spring and Summer
bring!

DESERT BLOSSOM

By RHONDDA HOLLICRAFT
Bloomed not in such a regal bower
As this small cactus nobly 'throned
In splendor. Laced and boned
With feathery spines, needle-swift
To pierce one's armor and to lift
One's questing hand in haste
To save it from the needless waste
Of too presumptuous admiration.
Sovereignty scorns such adulation!

DESERT CREED

By JUNE LEMERT PAXTON
Yucca Valley, California
Making the most of each blessing,
No wastefulness or greed;
This is the law of the desert,
A humble and noble creed.



Most folks call them horned toads, but they really are lizards. They live among the sand and rocks of the desert Southwest and prey on ants and other insects, and when night comes they wriggle their way into the sand where they remain until the sun's warmth brings them out again. Here's a close-up of one of the harmless little denizens of the desert.

They're Harmless Little Reptiles

By WELDON D. WOODSON
Photographs by Keith Boyd

WE HAD just passed Barstow, California, and were headed west along Highway 66 when Keith Boyd suddenly slammed on the brakes. When I looked at him inquiringly, he pointed to the pavement less than three yards ahead of the wheels.

There, perched on the pavement with their heads lifted as high as their forelegs would permit were two horned toads, no more than six inches apart.

"That was a close call for a couple of lizards," Keith remarked as we got out of the car and approached them. They remained motionless except for rapid blinking of their eyes. Keith was right. Although most people call them horned

toads, their prominent tails, the scales on their bodies, five clawed toes on each foot and other anatomical features definitely mark them as lizards. They belong to the family *Iguanidae* and the genus *Phrynosoma*. They are harmless reptiles, commonly found in Utah, Nevada, New Mexico, Arizona and Southern California.

On the dark pavement, their light grey bodies were more conspicuous than in the sand, and this fact plus Keith's sharp eyes probably saved their lives. Their color, however, varies according to their environment. In regions where they live among the black lava rocks their skin is generally dark, while in the mountainous regions their markings may be red or even bluish. It is nature's coloration to protect them from their natural enemies—the birds and snakes.

As we watched them they suddenly scur-

ried down the highway, starting as if on signal and remaining abreast until they stopped again several yards away. Coming closer we could see the detail of their skins—a crown of horns on their heads, sharp-pointed scales studding their backs and sides and rows of spines running around their broad flattened bodies and thick blunt tails.

The horned lizard's spiny exterior makes it an unappetizing meal for desert animals. The sidewinder, or horned rattlesnake, has been known to attack the horned lizard and swallow it. The results are often disastrous. There are cases on record where the lizard, still alive within the snake's body, turned its head from side to side gouging its horns through the lining wall of the reptile, and the victor and vanquished died together.

Since lizards breed large families—one



report states that a single female bore 27 progeny—and the pair looked so much like twins, we decided to spend an hour hunting for other members of this lizard family—with a camera. One of their favorite delicacies is ants, and we searched around the ant hills. The sun was high, and that is the most likely time of day to find them. At sunset the horned lizard pokes its nose in the sand, wags its head from side to side, and pushes with its feet until the fore part of its body is covered. Then it wiggles its tail as it bores in and gradually disappears beneath the surface. It remains under cover until late the next morning when the warm sun's rays bring it back to the surface again.

Certain horned lizards possess a pearly translucent scale near the center of the head, which according to some theories, is the remnant of a third eye. It is believed that remote ancestors of this reptile actually made use of three eyes, but the middle one because of disuse and other factors ceased to function. Even so, when the lizard buries itself in the sand it arranges to have this peculiar scale close to the surface. Science suggests the possibility that the vestigial third eye can distinguish between light and dark. There is the possibility that the sun's rays as they reach it through the thin layer of sand arouse the lizard from its siesta.

We searched one side of the highway in vain. But when we crossed over to the other side horned lizards appeared to be popping up from every direction. Actually, only three more were found, but we saw them almost at the same time.

We picked one of them up to examine it more closely. Suddenly two tiny streams of reddish fluid shot out from its eyes to the earth, a distance of three feet.

This blood-squirting trait has been a marvel to science, although not a mystery as to how it takes place. When the lizard is excited or angered, the eyes become gorged to the point that the thin membrane breaks and the blood shoots out. Not all horned lizards do this, however, and scientists a half a century ago even doubted that any of them did. One herpetologist tested over a thousand lizards before he found a single individual that performed this unusual act.

Some of the aborigines knew about this characteristic, however, and regarded the horned lizard as a sacred toad. Today, while we have no superstitious awe of the "toad," we do respect it as one of the most interesting and harmless little denizens of the desert—a creature that deserves no mistreatment from those who find it in its native habitat.

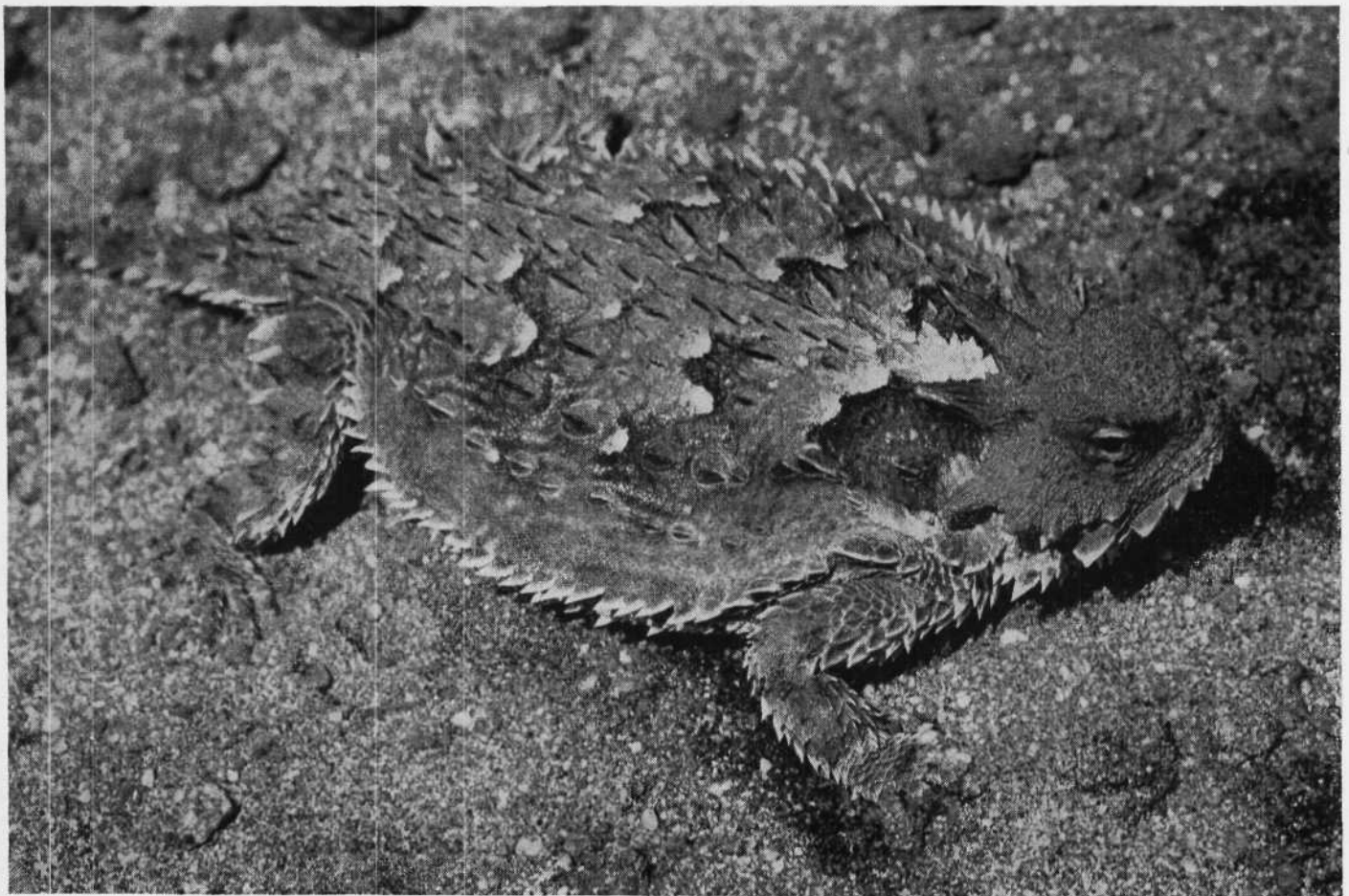
INDIANS WIN IN CONTEST OVER GRAZING LANDS

White stockmen will be prohibited from grazing their livestock on 220,000 acres of Indian lands in Utah without first obtaining grazing permits from the Indian service, under a decision handed down by Federal Judge Tillman D. Johnson. The judge said: "I cannot believe congress intended that the Indians be deprived of the use of such lands without receiving compensation for their value through sale or other disposition."

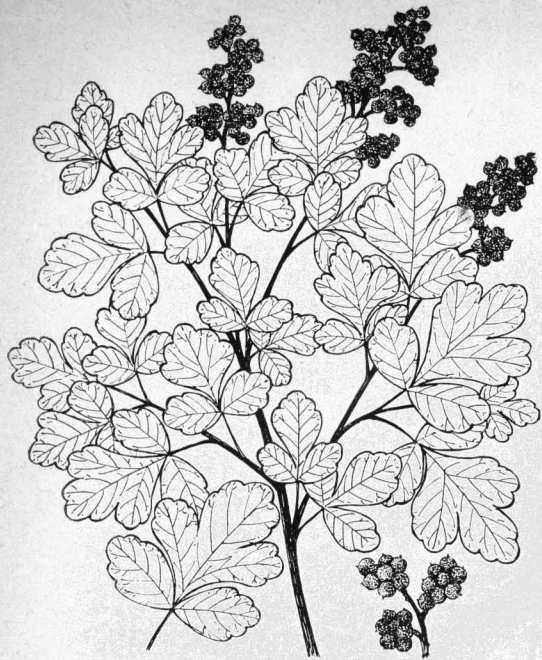
Please 'scuse!

Desert Magazine office has been almost snowed under with orders for loose-leaf binders since the February issue appeared. Orders have been coming in faster than the book-binding concern which is making these covers has been able to turn them out. So if the binders you ordered have not arrived promptly, please excuse the delay. They'll be coming along in due time.

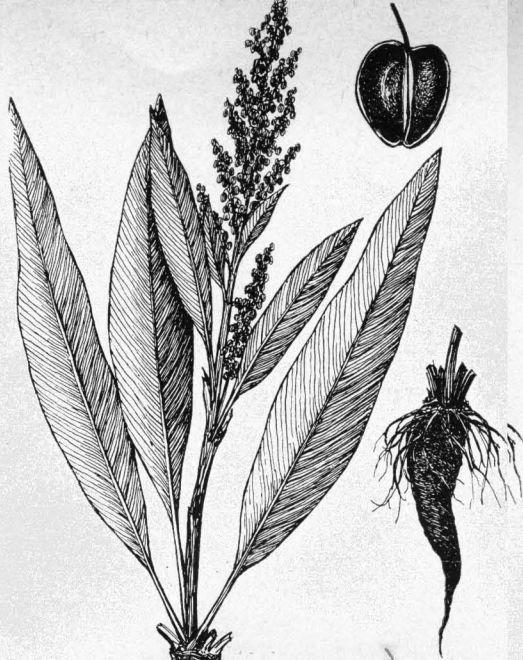
DESERT STAFF



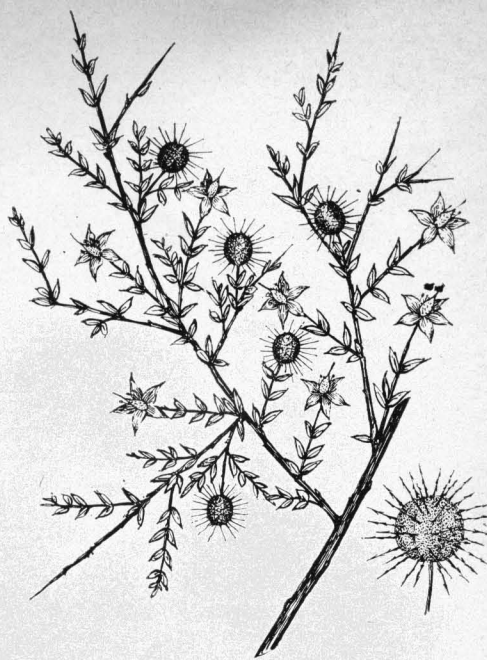
Note how perfectly the coloring of this horned lizard blends with the sandy environment in which it lives. This is Nature's device to protect it against birds and animals of prey.



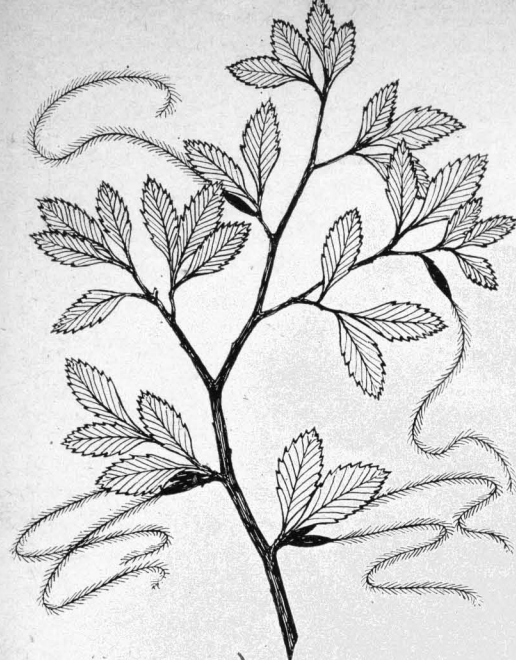
Elderberry plant, common in many places was used by Indians of southern California to make a fast black for basket splints.



Canaigre or wild rhubarb, a kind of dock is native to Arizona. The roots make an orange-yellow dye for cotton and wool, red on leather. Upper right a single blossom, lower right is the root.



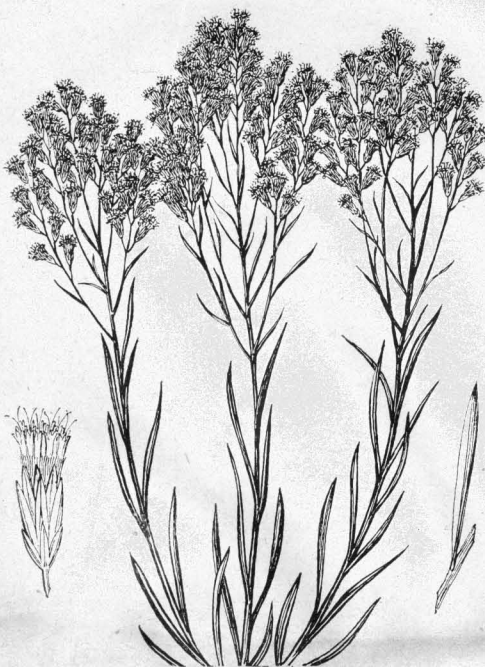
Krameria or "ratany," a treacherous and thorny bush whose roots made a yellow dye for the Papagos. Wild in many parts of southern Arizona.



Mountain mahogany. The bark, rich in a peculiar dyestuff makes interesting shades of red on wool and cotton.

THE "big room" of the ranch house at the LK Bar, near Wickenburg, Arizona, had three doors. There was the old north door, sinister and forbidding for no obvious reason and never used. Some doors are like that. Then there was the south door just about the right means of egress if you had to go to Phoenix to see a lawyer. Then there was the door. This was simply the entrance to the big room from the kitchen—a door to invite loitering and conversation. Its entire personality was friendly and unsophisticated. It was several days before I realized that this feeling of good will radiated from a well-worn Navajo blanket that served as a rug in the doorway.

Rabbitbrush. A common plant in many parts of Arizona and California. The yellow flowers made the lemon-colored dyes used by the Navajo weavers. The foliage made a green dye.



This blanket was obviously a veteran. Certain frayed creases told of service as a saddle blanket. Three burnt holes spoke of campfires, and two darned places reflected credit upon unknown owners. It had been five years in its present place. A little threadbare and trampled pretty smooth, the colors were still there, creamy white, grey, brown, black and a strangely interesting reddish cinnamon that fitted the scheme as perfectly as the orange spots fit the pattern on a Gila monster. But how did the Indian weaver get such pleasing colors that defied time and heedless boots?

From my aunt I learned that some of these colors were the natural colored wool of the Navajo sheep. But the black and red were artificial. Black was said to be made from the leaves of a certain bush and a mineral the Navajo found in their own territory, and the red came from boiling two different kinds of bark. My aunt ran short of information at this point but could contribute a few items of her own about natural dyes. One plant she showed me was a kind of dock, canaigre (*Rumex hymenosepalus*), source of a reddish dye for leather and an orange-yellow on wool or cotton. The other plant was rabbit brush, (*Chrysothamnus nauseosus*), whose blossoms furnished a brilliant yellow on yarn or cloth.

The question of Indian dye making has intrigued students of American ethnology for a long time and much has been published in official reports, but in some cases the information is unsatisfactory.

The origin of black dye is unknown but some of the Cliff-dwellers and Basket-makers were acquainted with a fast black, perhaps this same dye prepared by a formula now lost. They also had a fast red. After hundreds of years cotton textiles from the debris of long-abandoned cliff

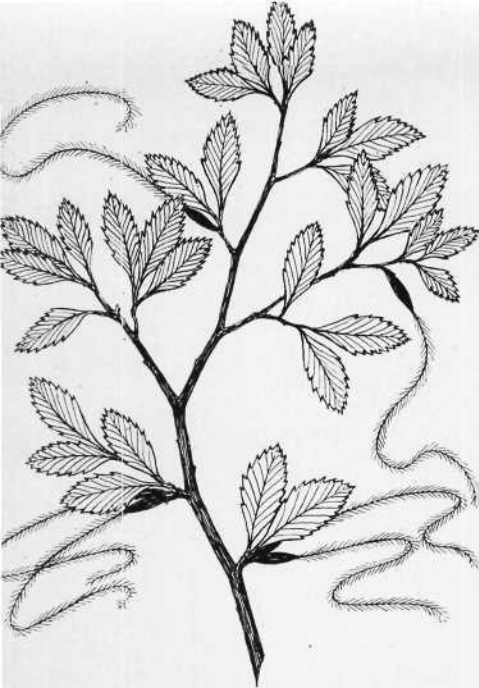
Indians Made Their Own Dyes

While prepared dyes now are generally in use among Indian weavers, some of the older tribesmen still color their wool with dyes which they brew themselves from the shrubs they find on the desert, and from rock pigments. Jerry Laudermilk's story of the making of these natural dyes is the result of many years experimenting in which he has sought to duplicate the dye-making art of the Indians.

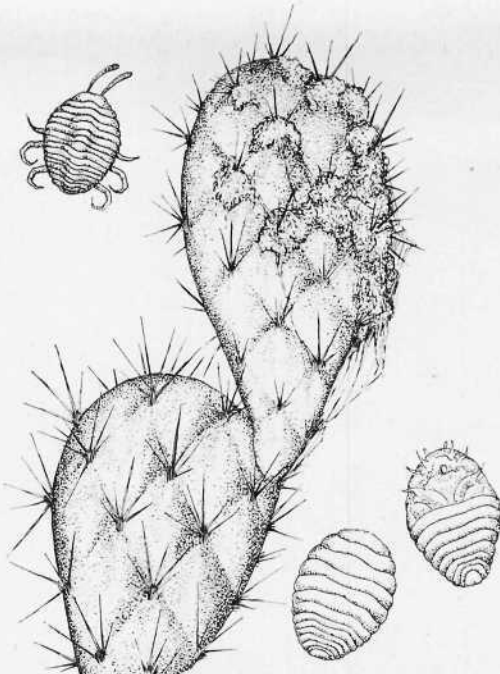
By JERRY LAUDERMILK
Drawings by Helen Laudermilk

Permanent dyes of harmonious hues are all-important in the making of the beautiful Navajo rugs. This photograph was taken in a corner of the exhibit building at annual Inter-Tribal Ceremonial held at Gallup, New Mexico. Photo courtesy New Mexico State Tourist Bureau.





Mountain mahogany. The bark, rich in a peculiar dyestuff makes interesting shades of red on wool and cotton.



The wild cochineal insect furnished shades of red. A young bug is shown at upper left; two mature females are shown at lower right. Tufts of cotton on the cactus pad are tents of the insect.



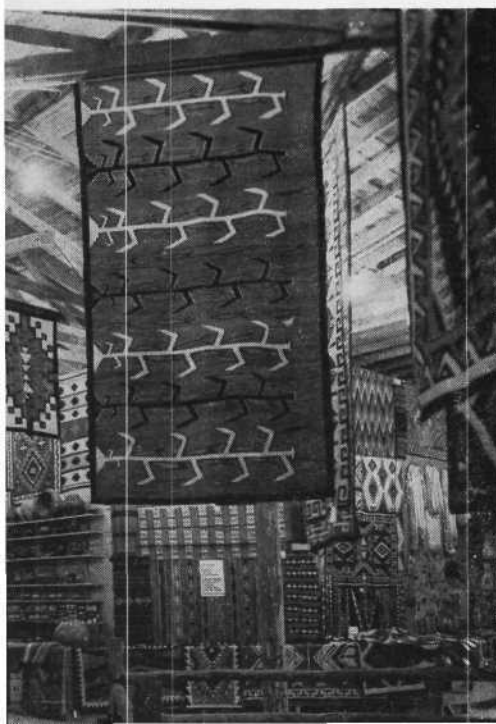
Ho-bo-it-si. A cousin to the coreopsis. The flowers make an orange-red basket dye used by the Hopi.

Made n Dyes

in use among Indian weavers, in wool with dyes which they l on the desert, and from rock making of these natural dyes is which he has sought to dupli-

R MILK
ruder milk

in the making of the beautiful Navajo exhibit building at annual Inter-Tribal esy New Mexico State Tourist Bureau.



houses near Kayenta in northeastern Arizona, still show strong color. These ancient dyers were no mere dabblers in their art since they understood the importance of certain chemical assistants to good dyeing called *mordants* which serve to fix the color fast to the fiber. The theory as to how mordants work is highly technical but briefly it can be described as a kind of "go-between" action where some chemical which "likes" both the dye and the fiber carries along the coloring material when it fastens itself upon the yarn. Other mordants work by putting the fibers in a chemically friendly mood toward the dye so that the latter will stay fast after it once colors the yarn. So much for the black in my aunt's blanket. The red was a different subject entirely.

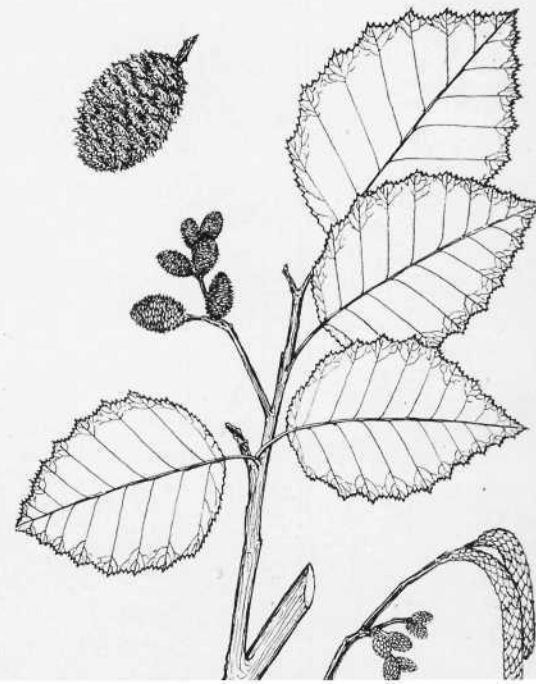
In old times the Indians found it difficult to obtain a good red. With the exception of the Pimas who had the means for making true reds and pinks which I will describe later, the best they could produce were low-toned shades of reddish brown, pinkish tans and dusky orange. These are the reds found in the oldest textiles. Of course, before Spanish times there was no wool except a little from mountain sheep killed in the hunt. The only yarns of animal origin were made from the hair of rabbits, dogs, badgers, etc., and from feathers. These were twisted into string with yucca fiber and cotton. With the arrival of sheep and plenty of wool there still was the difficulty about a true and brilliant red of scarlet or crimson shade. Later they met this need by unraveling yarns from a type of Mexican red flannel called bayeta and re-weaving it in their fabrics along with yarns of native dye.

The best early reds were made by extracting the bark of alder (*Alnus obongi-*

folia) and mountain mahogany (*Cercocarpus montanus* and *C. breviflorus*) with boiling water until a dark red decoction resulted. The liquid then was strained and the yarns boiled in the solution until the dye "took." The mordant used for this color was fine juniper ashes. According to one source the secret of a fine permanent red of the henna order was to add a certain rather rare lichen (*Parmelia mollinusculae*) to the dye bath. In my experiments I tried several different lichens since the one prescribed was not available. My best results were with a common species (*Parmelia conspersa*). The resulting color was, appropriately enough, found to be called Apache Brown in the color dictionary.

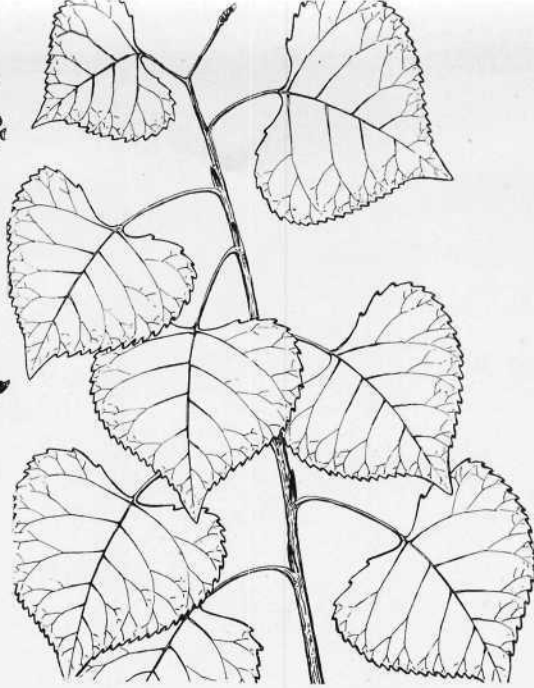
Mountain mahogany bark alone makes

Alder. The bark boiled with that of mountain mahogany made the fast reddish browns found on old Navajo blankets.





Sumac, also called "squaumbush" is exceptionally rich in tannin and forms an essential ingredient in the black dye of the Navajo.



Cottonwood. The leaves are a source of beautiful, fast yellows on both wool and cotton. It is common everywhere.



Piñon pine. The gum heated with yellow ochre makes the other essential ingredient of the Navajo black.

a reddish shade called Castilian or Old Cedar. The smooth slate colored quills of dry bark are hardly what you'd expect to use for a red dye, but once in boiling water a subtle chemical change begins and the bath grows redder and redder until finally it becomes almost black. This gives a full, rich color on wool but paler and pinker on cotton. To avoid disappointment with this dye it is essential to use clean water and dye-pots and freshly washed yarn. The dyeing operation can be carried out properly only in pots free from iron. The merest trace of iron dulls the color by making it smoky.

The red dye of the Pimas was carmine from the wild cochineal insect of southern Arizona and California. Apparently this dye was used only for decorating wood-work, especially war arrows. Colonies of the cochineal bug make their homes in tufts of white, cottony down on the pads of prickly-pear cactus. If you pinch a wad of the white fluff you will find the tips of your fingers stained a brilliant carmine from the insect. Until the discovery of aniline dyes, cochineal was an important source of fast reds and violets. Perhaps the complicated manipulations necessary for success with this dye were beyond the grasp of the more primitive tribes of the Southwest.

But in Mexico at the time of the Conquest, cochineal was extensively used both for dyes and pigments. The prepared insect "nochitzli" formed part of the tribute levied by Mexico upon some of her neighbors. My own experiments with the wild cochineal were only moderately successful since the best colors I could make were shades of pink and old rose. The dye is worth experimenting with if you live where the insect is abundant.

Orange color is rare in woven Indian

textiles but not unusual in some Hopi baskets. To make this color the Hopi used the dry flowers of a plant called "Ho-ho-it-si" (*Thelesperma gracile*), first cousin to the coreopsis. The flowers are boiled to make a strongly colored dye and the splints boiled to the right shade without the use of any mordant. On cotton the color has to be set with alum. The hue is a red-orange, fast to light and fairly fast to water. In the cases of this dye and the yellow dyes which I will take up next, the coloring principle itself belongs to an interesting series of pigments called the *anthoxanthins*. Some of these—quercitrin from black-oak bark is one—are important dyestuffs which long have been articles of commerce.

In their pure condition the anthoxanthins are only slightly soluble in water but dissolve easily in dilute acid. All plants contain some vegetable acid, so when a decoction of *ho-ho-it-si* is boiled there is enough acid naturally present to dissolve the dyestuff. They also dissolve in alkaline solutions to make shades of yellow-orange and easily form insoluble compounds with mordants such as alum.

The Hopi have another dye called *c'vapsi*. This is made from the dry flowers of the rabbitbrush (*Chrysothamnus nauseosus*). The flowers carefully separated from any green foliage dye a beautiful lemon yellow. For dyeing wool, a large quantity of dry blossoms are boiled slowly for about four hours. When the color is deep enough the yarns are put in and boiled for fifteen minutes. They are now ready for the mordant, native alum, a common mineral in many parts of the desert. This is a white dry crust-like salt with a sour, puckery taste. Indian dyers carefully heat the alum until it becomes

pasty and then add it to the dye bath while the yarn boils. Soda deepens the color.

Another beautiful yellow from palest canary to deep brass and old gold is furnished by the leaves of the cottonwood (*Populus fremontii*) and other species. Apparently this was not used as a textile dye by the Indian weavers but it is one of the best yellows and some of the western tribes used a strong decoction of the young leaves for a yellow and orange dye for arrow feathers. This dye is fast both to light and washing.

Green is a difficult color to make in absence of a good blue which top-dyed with yellow can make any shade. To obtain green the Indians used leaf-green or chlorophyll, generally from the green parts of the same rabbitbrush that furnished lemon yellow. Chlorophyll is tremendously light-sensitive and usually fades with the slightest excuse. But in some cases leaf-green has lasted for hundreds of years. In one of the many caves explored by Kidder and Guernsey in northeastern Arizona, the inhabitants had built partitions across the cave with leafy oak boughs and after all the centuries between the day they were gathered to the hour of their discovery, the dry oak leaves still clung to the branches green and unfaded. Leaf-green forms permanent, light resistant compounds with copper salts and it is possible that where leaf-green from some particular plant is recommended as a dye, copper salts are unusually abundant in the plant juice.

Blue, before the Spanish introduced indigo, was little used as a textile dye except for the navy blue shades of the Navajo black dye. However, there was another blue not commonly known. This was from the Hopi blue bean, raised both for a food and for making a light blue to almost black on textile fibers.

The following formulas based on the Indian dyes are ones from which I have removed most of the "bugs" and are included for the benefit of readers of *Desert Magazine* who may want to try their hands at this ancient art:

BLACK. Take as many sumac leaves as will fill a half gallon measure. Bruise in a mortar or run through a food-chopper until well pulped. Cover with half gallon of water and boil for two hours, renewing water as lost by evaporation and strain. To make the second ingredient take equal volumes of powdered piñon gum or ordinary drugstore rosin and natural yellow ocher—the paint store kind will not do. Natural ocher is known in the mineral world as limonite or common rust. Grind the rosin and ocher to a fine flour and mix thoroughly by sifting. Transfer this mixture to an ordinary iron skillet and while stirring continually with an iron rod, heat it over a charcoal fire. Avoid flames since burning will spoil the product. At first the mixture will melt, bubble and give off puffs of yellowish smoke as it grows darker and darker. After about an hour, the now black mixture will begin to roll up in wads under the stirring rod. As soon as these wads begin to show a rubbery consistency it is time to take it from the fire. The compound will look like black, vesicular lava. Grind this material to a fine powder and add it to the leaf decoction and let it boil. At first the liquid is simply a muddy, brown fluid but as boiling continues a rich, blue-black color develops. To dye wool in this bath immerse the wet yarns and boil until they show a deep black which does not strip in the rinse water. The yarn should remain black after the loose dye is washed off. To dye cotton you need three baths, one of the prepared leaf solution alone, one of clear limewater and the blue-black bath. Boil the cotton yarns in the sumac bath for an hour. Lift and pass directly into the lime bath and let soak for half an hour. The yarns now will be a deep brown. Let the yarn dry thoroughly, dampen and then boil in the blue-black bath. The result will be a deep slate color.

RED. Grind the dry barks of alder and mountain mahogany to a coarse meal. Add two cupfuls of alder and one of mountain mahogany to half a gallon of water in a copper dye pot. Boil for two hours renewing water as lost. Strain and add about one fourth teaspoonful of sodium carbonate (sal soda). The solution will become intensely red. Immerse the yarn and boil to the desired color. The color is fast on wool but weak on cotton.

YELLOW. Take a half gallon measureful of fresh, uncrushed leaves of cottonwood. Cover with half gallon of water and boil until the solution becomes a clear, strong yellow. Remove the leaves and boil for ten minutes. Add half a teaspoonful of sodium carbonate and a teaspoonful of powdered alum and immerse the yarn. Boil

for half an hour. The yarn will be an intense yellow, fast to soap and water on wool or cotton.

GREEN. Grind fresh, green leaves of elder (*Sambucus coerulea*) in a food-chopper until about a quart of pulp has been prepared. Squeeze the juice through muslin into a copper pot or glazed crock. Immerse the yarn in the cold juice and soak for two hours. The yarns will be a deep moss-green which would fade in either light or water. To set this dye, have ready a second bath containing half a teaspoonful of powdered copper sulphate and one cupful of vinegar in a quart of

water. Heat this bath to boiling, immerse the yarns and boil for half an hour. Rinse once in cold water and then put through a bath of dilute sodium carbonate (tablespoonful to a quart of cold water) and rinse again. The result will be a lettuce-green fast to light and water.

Experimenting with natural dyes is not time wasted. In some respects they are more satisfactory than many of the artificial dyes, since they fade "true"; that is, they fade to paler shades of the original color. Besides this there is a satisfaction in doing this primeval chemical magic with native materials you gather yourself.



On the Hopi reservation the weaving is done by the men. In former days the Hopi were excellent dye makers, making colors not only for wool and cotton but also pigments for wood and leather used in their Katchina and other ceremonial costumes.

Desert's Shower of Gold

By MARY BEAL

LUVIA de Oro was the harmonious name given by the early Spanish-Americans to the bare-branched Palo Verde when spring's magic touch turned it into a sparkling golden fountain. Never will I forget a certain splendid Palo Verde I saw one March day glorifying a stretch of desert between Salton sea and the cultivated fields of Imperial Valley. It stood somewhat apart at the side of a shallow wash, its bright color drawing the eye like a magnet long before we could distinguish anything but the gleaming splash of golden yellow. Like a geyser of flowing gold it gushed forth into countless sprays of bloom, spreading out much broader than its height, the trunk and branches obscured by the profusion of its flowering. Probably it was not more than 15 or 20 feet high but it loomed up conspicuously on the flat from far away, a marvel of lavish bloom that fairly took my breath.

The name "Palo Verde," literally green pole or stick, is another of those Spanish terms so descriptive that it is adopted for everyday use. The bark of this tree is bright bluish-green and satiny smooth, from trunk and branches to every twig, though on very old trees the trunk may roughen and the vivid color darken.

Beauty is not its only asset. Its flowers yield nectar for honeybees and the pods, ripening in July, are welcomed by livestock in times of drought, though stock are not much interested in them when other feed is available. The Indians however made good use of the beans, grinding the ripe ones into a meal for porridge or mush. Some tribes used the very young seeds, cooked whole, or the tiny embryo eaten raw, or sometimes toasted.

Botanically it belongs to the Pea family, although some botanists segregate its allied group of genera into the Senna family. Our featured Palo Verde's label is

Cercidium torreyanum (*Cercidium floridum*)

The last specific name (meaning flowered), used by some botanists, describes it well, for few trees are so abundantly beflowered. The tree averages 15 to 25 feet in height but it is not unusual for specimens in favorable situations of deep moisture, as along small streambeds, to attain 30 or even 40 feet. Although during most of the year the branches, armed with small short thorns, are bare of leaves they never are dead-looking, but always have a lively air because of their vivid green. Very early in the spring the scanty lacy foliage appears but lasts only a short time, usually falling before the flowers reach their climax.

The twice-pinnate leaves have a short common petiole topped by two pinnae, each bearing 2 to 4 pairs of small oval leaflets about one-fourth inch long. The showy flowers are one-half to three-fourths inch across, borne on slender, jointed pedicels, disposed in short loose clusters. The 5 broad, rounded petals are clawed, the upper one broader and longer clawed than the others, their brilliant yellow charmingly set off by the 10 ruby-red, long-stalked anthers. The pods are linear to oblong, 1½ to 4 inches long, flattened, and sharply-pointed at both ends, usually constricted between the square flat seeds.

Its radiance lights up many washes and flood plains at low altitudes in the Colorado desert, southern and western Arizona, Sonora and Lower California. Occasionally it is found on alluvial soil of the lower slopes below 3500 feet elevation. Being rather sensitive to frost it is noticeably rare on the Mojave desert, being no more than an immigrant, although I know a good many thriving specimens that have taken kindly to a new environment, scattered along from my home base in the central Mojave to Needles. It blooms from March until June. Sometimes called Blue Palo Verde to distinguish it from the following species.



Lluvia de Oro, or Blue Palo Verde. Photo by the author.

Cercidium microphyllum (*Parkinsonia microphyllum*)

Sometimes only a shrub 5 to 10 feet high, in tree form it varies from 12 to 25 feet in height. The twigs are spine-tipped but there are no other thorns. The bipinnate leaves have 2 sessile pinnae on an extremely short common petiole, each pinna with 3 to 8 pairs of minute leaflets, not much larger than an ordinary pinhead but elliptical. The flowers are pale yellow borne in loose racemes, the odd one of the 5 petals often whitish. The cylindrical pods are 1½ to 3 inches long, conspicuously constricted between the few seeds, the apex tapering to long slender beak. The paler flowers give it less brilliance than the *Lluvia de Oro* but even so it makes quite a display at blossom time. In California it is found only in the gravelly hills and washes of the Whipple mountains along the Colorado river. It is common in western and southern Arizona on dry rocky hillsides and mesas up to 4000 feet, and crosses the border well down into Mexico and Lower California, blooming a trifle later than *Lluvia de Oro*, usually in April and May.

Parkinsonia aculeata

Occasionally shrubby but usually a tree up to 40 feet high, its smooth bark yellow-green, turning brown in age, the branchlets armed with short thorns every inch or so. The bipinnate leaves are seemingly a pair of pinnate leaves, the common petiole being almost invisible. The pinnae, from 4 inches to nearly 2 feet long, have a broad, flat, spine-tipped rachis bearing from 10 to more than 50 pairs of small leaflets. The showy corollas are bright yellow, the upper petal with a long slender claw and a broad crinkly blade spotted with bright-red dots, the whole petal turning a lively brick-red as it ages. The elongated racemes and leaves spray out from the branchlets in loose, drooping clusters.

Really a Mexican species, it is native in our southwestern deserts only in bordering areas, from southern Arizona to southern Texas, favoring sandy soil in foothill washes at 2000 or 3000 feet altitude. But it is highly valued in warmer sections for cultivation as a quick-growing ornamental tree and you may see it frequently, especially in Colorado desert towns, and even in Southern California beyond the desert, notably a mile or so along the northern approach to Riverside, one of the desert's fine contributions to regions outside its boundaries.



Rising sheer above the Arizona desert like the ramparts of a long-forgotten world the weird Superstitions of Apache gods and Spanish ghosts guard the secret of long-lost mines.

Lost Mines of the Peraltas

By BARRY STORM

APACHE thunder gods were first in the wild Superstitions. They were there a thousand ages before *conquistadores* called the unknown land *Pimeria Alta*, before white men had given a name to that incredibly twisted maze of somber canyons and jagged, lofty crags which rise abruptly like a lost world set apart high above the Arizona wastelands.

The thunder gods are still there in the weird immensity of their domain as all good Indians will affirm—and many white men also. But now there is gold, yellow glittering gold, found and lost with bleaching bones to guard it, and strange noises in the nightwind. And a pagan curse is abroad on the land—the curse of all men who have too little and want too much.

The curse and the gold were found together nearly a century ago, the result of a deliberate treasure hunt. But the gold was lost again. And even today men are searching for the eight fabulous bonanzas which were first worked by the ill-fated Peralta expedition from Mexico.

The lure of Apache gold cost Pedro Peralta his life but according to legend, much of the gold he found is still buried somewhere deep in the Superstition mountains of Arizona. Here is the story of the first Peralta mining operations in the Arizona mountains—and of the original discovery of the claim which in more recent years has been known as the Lost Dutchman mine.

The year was 1846. It was the period when Santa Fe as capital of a remote frontier province was the jumping off place for a vast western territory infested by savage Indians—and, the Peralta brothers hoped, gold mines in the raw. For the Peralta silver mines in Chihuahua, after two generations of furnishing a living in the pleasant manner due Spanish noblemen, were at last near exhaustion. Their owner, Miguel Peralta, had just returned home from a trip to the headwaters of the Rio Salado with a perfect way to remedy the situation.

"This *rio* drains a virgin wilderness," he told his eager sons, "in which gold anywhere will give clues to itself as placer—erosion-borne particles—in the riverbed. Follow the river then until you find such placer gold, and trace it back to its source."

This was excellent prospecting advice in any time or country. And it was exactly what Pedro, Ramon and Manuel with their little band of family retainers were doing as they journeyed for endless weeks down the ever-widening course of the Salt River. They followed the rushing waters through high sheer-walled gorges cut through multi-colored rock, travelled past boulder-choked rapids and verdant oases of willow and cottonwood, briefly green against the eternal browns and reds and greys of tuffa, sandstone, basalt and rocky soil. Occasionally they tested for gold where tributary drainages poured water into the river or where sandbars or riffled bedrock made a natural gold trap in the riverbed itself. And always they pressed relentlessly on toward a horizon as distant and vague as the purple

clouds at sunset. Then finally on a lucky fall day they rounded an abrupt bend in the river's shadowed chasm to find before them (at the present site of Mormon Flat) a veritable paradise in that country of sun-baked, rainbow-hued rock, a small, verdant valley in the middle of which La Barge creek, then unnamed, tumbled down in miniature cascades from a range of jagged mountains on the south. From the wild, uncharted Superstitions!

So was history made. And so began legend . . .

For there at the junction of the stream and the river they fell to work with goldpan and shovel as they had a hundred times before. But this time, gold was there, a fabulous treasure trove of bright, yellow flakes, caught beneath the sands of the riverbed from a million years of rock-pulverizing erosion above.

Indeed only a fantastic bonanza containing undreamed of wealth somewhere in the rugged maze of deep canyons and rock spires above could have released such a store of treasure! And with the first wild shout of discovery the trek of the Peralta brothers stopped with dramatic suddenness, and an excited consultation was held.

By this time their provisions had dwindled. And Pedro, who as eldest brother was in nominal command, decided to split up their forces in the interest of speed. And he left Ramon and Manuel to build a permanent camp at the desert oasis and construct the two arrastres which still may be seen there when the water is low. And so the two grew wealthier and more selfish day by day as they worked the placer beds. As gold piled up, they grew ever more fearful of the newly found fortune. Sulking savages had been seen in the vicinity.

In the meantime Pedro was on the trail of golden ore for the arrastres which he had ordered built. Higher and higher he climbed from La Barge into Boulder creek, on up Needle canyon and into the very heart of the Apache thunder gods' own sacred mountains. There within a region from one to two miles northerly of a towering, hat-shaped peak which he named *La Sombreira*, the placer trail thinned out and he fell to prospecting for the source of the metal.

First, he tried a steep tributary canyon (now known as Bluff Springs), followed its brush and boulder choked course upward over waterfalls and cliffs to the top of the high, plateau-like Bluff Springs mountain, and left behind as proof of his presence narrow exploration cross-cuts on several quartz veins. Again, he tried farther up Needle canyon which drains the west slopes of Bluff Springs mountain, and left another cross-cut on the side of a hill. Then finally high on the eastern slopes of a black-topped mountain a mile and a half due north of *La Sombreira*, he came upon rich twin outcrops of reddish, gold bearing quartz. Circling around the same mountain he found a third on the north side and still another below the southwestern slopes. Four bonanzas!

Exciting weeks fled then in swift succession while the wheel of fortune spun crazily. But soon provisions were gone and the mules were staggering under capacity loads of shining yellow rock ready to be crushed in the arrastres. Pedro, after the fashion of miners who must leave good ore behind, went down into Needle canyon below, into which the eastern slopes of the black-topped mountain drained, and there made a key marker by driving stones into a giant saguaro cactus. This cactus stood upon the end of a rocky ridge which jutted into the canyon and was consequently outlined in bold relief against the sky so that it would have been almost impossible for him later to pass by without seeing it. Then from this marker he made a triangulation map by drawing the outlines of both the fabulous mountain to the west and *La Sombreira* to the south so anyone could return to the proper region merely by traveling up Needle canyon until a point was reached from which both landmarks matched the chart from entirely different directions.

Then Pedro returned to the river to find his brothers impatiently awaiting him.

Indians, it seemed, were the trouble—and the impatience that

a golden fortune would bring to anyone. Nor did Pedro's tale of yet more gold change their minds.

"We already have enough for a lifetime," explained Ramon and Manuel. "And we have decided to enjoy it while we may. We want to go far south of the village Tucson where cattle flourish and establish a great *ranchito*. For here each day more savages come to prowl about and harass us. Soon we might be overwhelmed. And then what of our gold?"

Pedro laughed at their fears. He loved gold more than he feared disaster. Moreover, the gold was inexhaustible, it seemed, a prize in a thrilling game. So wasn't the gamble of finding it, the risk of getting away with it of far more importance?

"We part then," Pedro said, "because I am returning home for a larger expedition with which to work the mines. So let us divide all equally with a fourth share for *padre*. And I will draw each of you a chart should you desire later to return."

The two copies of Pedro's map which went south into Sonora with Ramon and Manuel were bright threads in the amazing skein of golden disaster which Apache thunder gods were even then weaving with sardonic mirth. For the towering pinnacles and sheer, chasm-cliffs of the Superstitions were age-long Apache domain—sacred ground to be guarded with life and honor by every savage who feared the midsummer lightning bolts and crashing thunder, the roaring floods of winter which angry deities sent down those deep, rough canyons!

Back from Chihuahua City to those same mountains came Pedro again in the winter of 1847-48 with 68 men and 200 mules. Back to golden fortune—and savage death!

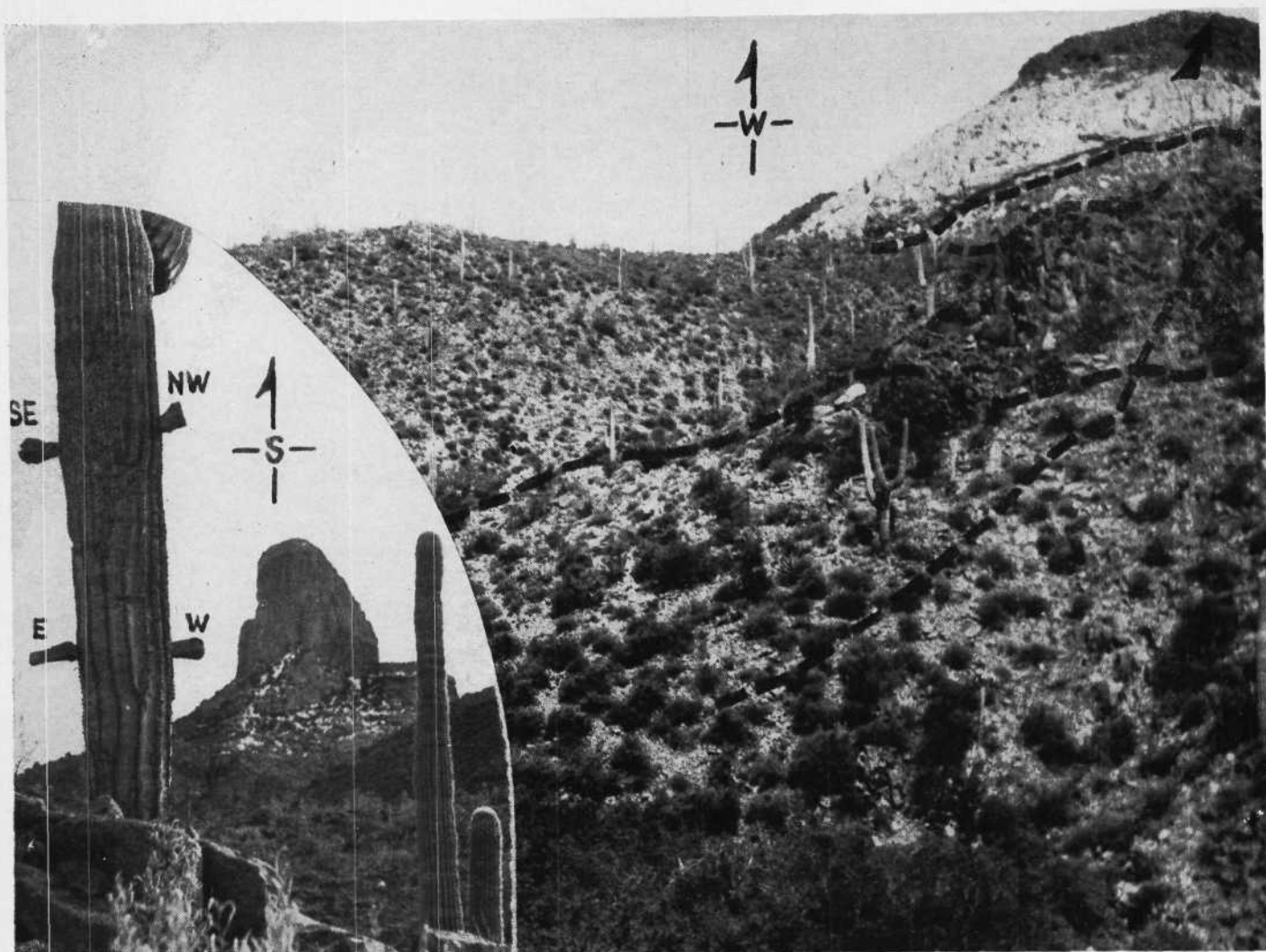
No sooner had he returned to the arrastres upon the river in the fall of 1847 than skulking savages began to appear, were glimpsed here and there like furtive ghosts.

The very nature of that incredibly rough country, the somber chasms of La Barge, Boulder and Needle canyons, each with its labyrinth of countless tributary arroyos made excellent cover in which silent Apaches came and vanished like furtive phantoms. And continually from such vantage places warriors kept the gold hungry invaders under surveillance, occasionally transfixing a luckless miner with flint-tipped arrows that seemed to come from nowhere.

If Pedro had been a soldier he would have recognized the unmistakable portents of impending disaster and would have kept his men together. But he was a miner and the mad, driving urge to dig quick fortune from his mines, the romantic, reckless impulse to search for yet more gold at the same time made him ignore danger. And so he divided his strength, leaving a handful of workers at the arrastres, splitting the others into mining and prospecting parties which were scattered over several square miles in the wild region around the black-topped mountain which he had mapped before.

The prospecting parties almost immediately discovered two more potential bonanzas above the key marker in Needle canyon, both lying upon the steep slopes of a hill which jutted into the canyon from the western side. Then directly across from this hill in a steep-climbing arroyo which ran up the canyon's eastern side and under towering cliffs still a third vein of rich, gold-bearing quartz was found. Later, further exploration located one more mine site about three-quarters of a mile east of *La Sombreira*, near the western slopes of La Barge canyon. But this latter mine, which was rediscovered in 1940, was merely a conglomerate placer deposit formed in prehistoric times when the mountains lay under the sea and its gravels failed to match in fantastic richness the white and rose quartz ores of the other seven bonanzas.

There began in the Superstitions then feverish activity such as the mountains had never before witnessed. Permanent camps, of which there are still traces, were established in Needle, Bluff Springs and La Barge canyons, and in one of the arroyos at the foot of *La Sombreira* Pedro had a stone hut erected from which he could direct the mining. Nearby, too, charcoal pits in which to retemper and sharpen drills were dug and fired, trees were



The black-topped mountain which Pedro Peralta mapped, as it looks from the key marker in Needle canyon below. The arrow points to a Spanish miner's signs 1200 feet above. In the inset is shown the key marker with Weaver's Needle beyond. This pinnacle is the "Sombrero" of the Peralta legend.

felled and hewed into mine timbers and always the shafts were sunk deeper and deeper into gold-speckled ore which busy muletrains gathered and hauled to the arrastres. And so for many months the profitable business of mining went on.

By now the winter of 1847-48 had come and gone, the brief desert spring had long since faded and the heat of summer was on the wane. And then suddenly the Apaches, who had been content with occasional raids upon isolated miners and packers, began to attack in earnest. The roving bands of warriors grew constantly larger so that Pedro was forced to place more and more of his men upon guard duty to protect those mining. And unknown to him under cover of the harrassing attacks wily Apache chieftains far to the north across the river were massing together hundreds of braves with whom to destroy at one blow the invaders who so tenaciously worked and fought within their sacred mountains.

Pedro's first hint of the impending catastrophe came from the river on an unlucky September day when a scout staggered into camp to gasp out with his life a horrible tale of massacre at the arrastres. The Apaches had slaughtered the astonished workers upon the river and even at that moment were ambushing guards and packers. Then other scouts rushed into camp to inform the miners that death was indeed upon them, that hordes of fierce savages were swarming into the Superstitions in over-

whelming numbers and had already surrounded them upon all sides but the west.

Pedro immediately ordered his mules burdened with treasure—had them packed with all the golden concentrates which they could carry. A local cowboy in 1901 stumbled upon \$35,000 worth amid a heap of Spanish-shod mulebones on top of the black-topped mountain. And while the miners fought a desperate rear-guard action there Pedro himself buried the remainder on the fabulous hill which he had mapped, cutting in solid rock upon the top in the form of Spanish miner's signs a permanent memorandum of its location and the nearby locations of his richest mines. Then his band of miners fled in frenzied haste toward the open desert to the west—fled in the only direction which had been left open.

But they fled into a trap!

Apaches were there waiting, were indeed everywhere—hideously painted savages riding madly upon bare-backed ponies, screaming, fighting, killing in a blood-thirsty, superstitious frenzy. They drove the miners back against the mountain cliffs within sight and sound of the present location of Goldfield. Then from all sides came a deadly hail of arrows, savagely hurled lances . . .

The Apaches promptly scalped their victims and looted the packtrain, thinking they had obtained a fortune in booty. But unwittingly they left a greater fortune behind—yellow dirt, so they thought, which they dumped disdainfully upon the ground. Many years later in 1914 two prospectors, C. H. Silverlock and a partner, digging in curiosity amid the debris of a massacre, found part of it there—\$18,000 in glittering golden concentrates!

Now the invaders had indeed been destroyed to the last man.

But there still remained in the sacred domain of the thunder gods the sacrilegious work they had wrought. Moreover, the mine shafts and the yellow-flecked rock which had been uncovered there would no doubt be found again. And then once more an invading horde would swarm into the mountains. Should such a thing occur once more, said the medicine men holding solemn council upon the matter, the Apaches might forever after be punished severely by storms and floods and all manner of natural disasters which angry deities could contrive. So it was decreed that a band of thirty squaws and two youths would be sent back into the Superstitions to destroy all traces of the workings and cover the mines.

And there in the mountains this work party labored for one

full moon, throwing ore and hastily abandoned tools back into the shafts. Then they covered the mines with stout logs which in turn were covered with the natural caliche cement that hardens into rock, placing over the whole yet another covering in the cunning Indian fashion—this time of dirt and surface rocks to match the surrounding ground.

But with all this care the Apache squaws left one mine open because they thought it so well isolated and hidden that it would never again be found. And it was the most fantastic bonanza of them all, a mere shallow pit, newly opened, which was destined to become America's most sought-for mine. This was the legendary treasure that was to become known later as the Lost Dutchman mine.

Sez Hard Rock Shorty

of
Death
Valley

By OWEN THAMER



"Cold?" asked Hard Rock Shorty. Sure it gits cold out here 'n Death Valley. 'Member one winter when I had to break the ice on them warm Alum springs to git me a bucket o' water. An' old Pigsaw Bill who was drivin' stage in them days came in off the trip an' swore he see'd 50 jackrabbits hoverin' around the edge of that hot mud volcano down the valley tryin' to keep their toes warm.

From the shade of his soap-box on the porch of the Inferno store, Shorty looked out across the heat waves that simmered over the desert floor.

"Yep—that was the coldest winter I'd seen in more 'n 40 years. But these desert animals and reptiles seemed to know what to do about it alright.

"Inside the shack we kept the stove redhot, but along in midafternoon I went out to the mesquite pile to bring in some more logs. There was a big rattler curled up on the sunny side o' the pile tryin' to keep warm. He took a look at me and then shakes his tail. But no rattle. An' then he tries again and still no rattle. Finally he looks aroun' and sees that his rattles is all choked up with frost. So he puts his tail in his mouth an' thawed 'em out a little, and then starts 'er buzzin just like they's supposed to do. Then he looked at me kinda silly and slid under the log-pile.

TRUE OR FALSE

If you know the answers to 14 of these questions and are lucky enough at guessing to get four more correctly, you'll have

an exceedingly good score. The average person, not versed in the history and geography and lore of the desert, will hardly get half of them right. Regular readers of Desert Magazine will do better, because all the answers have appeared in this magazine at one time or another. Fifteen correct answers gives you a Desert Rat rating—and 18 is super-something-or-other. Answers are on page 36.

- 1—The horned toad belongs to the lizard family. True..... False.....
- 2—Carlsbad caverns are located in Texas. True..... False.....
- 3—Edmund Jaeger is author of *Denizens of the Desert*. True..... False.....
- 4—Onyx is one of the limestone minerals. True..... False.....
- 5—Reno is the capital of Nevada. True..... False.....
- 6—It is an old custom among Mojave Indian women to have their faces tattooed. True..... False.....
- 7—Volcanic craters are found only at the summit of mountains. True..... False.....
- 8—Desert lilies grow from bulbs. True..... False.....
- 9—The famous Snake Dance is held annually by the Indians at Taos, New Mexico. True..... False.....
- 10—The Dinosaur national monument is located in Utah. True..... False.....
- 11—Headwaters of the Little Colorado river are in the White mountains of Arizona. True..... False.....
- 12—Indians dwelling on the shores of Pyramid Lake in Nevada are the Paiutes. True..... False.....
- 13—The flower of the Palo Verde tree is purple. True..... False.....
- 14—Ocotillo belongs to the cactus genus. True..... False.....
- 15—William Manly was one of the survivors of the Donner tragedy. True..... False.....
- 16—The historic Mormon Battalion was formed to defend the territory of Utah against the invasion of a federal army. True..... False.....
- 17—Diamond is harder than corundum. True..... False.....
- 18—Pure bronze is sometimes mined by placer operations. True..... False.....
- 19—The site of the old port of Callville on the Colorado river is now submerged under Lake Mead. True..... False.....
- 20—Asbestos is made from the fiber of a desert shrub. True..... False.....

HERE AND THERE... on the Desert

ARIZONA

To Sell Salt River Power . . .

Arizona Salt River Valley Water Users' association has indicated that it will accept the offer of the federal government through Secretary of Interior Ickes to buy the power facilities of this project for more than \$28,000,000. The deal would involve the government's assuming the \$16,100,000 bonded debt of the association and the cancellation of \$8,268,410. Before the sale can be finally completed it will have to be referred to the 9,000 share-holders in Salt River valley for approval, and then passed by congress.

More Trout for Colorado . . .

KINGMAN — Ten thousand rainbow trout four to five inches in length are to be planted in the Colorado river in the near future, according to H. L. Reid, director of fisheries for the Arizona Game and Fish commission. The trout are six months old and were hatched at the Pine Top plant and later transferred to the Page Springs rearing ponds in lower Oak creek. The planting will be below Boulder dam.

Asks Help for Navajo . . .

HOLBROOK—Declaring that 50,000 Navajo Indians are living on lands that would not support 5,000 whites, Representative Murdock of Arizona has announced in Washington that he will ask congress for an extensive program of federal aid to include irrigation, reseeding of over-grazed lands and introduction of better strains of sheep. He described the Navajo as the No. 1 Indian problem of United States.

Verde River Project Report . . .

Estimated costs of bringing Colorado river to the Verde River above Granite Reef dam were made public by the U. S. Reclamation service in February. Bureau spokesmen said that if water were taken from the Colorado at Parker and boosted 1000 feet to flow into the Verde the cost is estimated at \$134,000,000. If water is brought from the Bridge canyon site it would require 95 miles of tunnels and the cost would be \$325,000,000.

Museum of Northern Arizona announces that for an indefinite period it will be open to visitors only on weekends. The hours are from 9 to 12 and 1 to 5 on Saturdays and 1:30 to 5 on Sundays.

Mrs. Edward Kolb, mother of Emery Kolb who owns a studio at Grand Canyon, died in Pasadena December 31 at the age of 92.

CALIFORNIA

Bobcat is Loser . . .

TRONA—Defending one of her prized hens, Mrs. Cleone Norman, art teacher in the Trona schools, seized the only weapon at hand—a chicken feed trough—and killed a bobcat which had invaded the dooryard of her Homewood canyon home. Her son and their three dogs were away when she heard a commotion among the chickens. When she went out in the yard, the cat stood its ground and snarled viciously. She snatched up the trough and killed the animal with one blow.

Tramway Project is Revived . . .

PALM SPRINGS—Backed by sponsors in this area, another bill authorizing the construction of an aerial tram from the desert near Palm Springs to a recreational area near the summit of Mt. San Jacinto, has been introduced in the state legislature. Similar proposals were passed by two previous legislatures and vetoed by Governors Olson and Warren. The plans provide for financing the \$1,360,000 estimated cost through revenue bonds sold to private investors. Title, however, will be vested in the Mount San Jacinto Winter Park Authority, a seven-man board named by the governor, the Riverside county supervisors and the City of Palm Springs. When the bonds are paid off the property is to revert to the public through the agency of this board and the state park commission. It is proposed to start the tramway in Chino canyon at an elevation of 2700 feet and operate to Long Valley at the 8500-foot level. The tram is designed to serve both for winter sports and summer recreation, operating the year 'round.

Wildcats Cause Short Circuit . . .

LONE PINE—Power service in this area was disrupted recently when two playful wildcats shinnied up a power-line pole and became involved in cables carrying 33,000 volts of electricity. When the repair crew arrived the bodies of two well-cooked cats were lying on the ground.

Beavers Menace to Canals . . .

BLYTHE—Two hundred beaver have been trapped by California and Arizona game wardens who are working together to reduce damage caused by these animals in the Palo Verde irrigation system. According to Manager C. P. Mahoney of the irrigation district the beaver build dams above the gate structures and cause canals to overflow in some places and dry up in others. Along the lower Colorado river there are said to be more beaver than at any time for many years.

THERE'S A WEAR GOING ON



The worst tire on your car is the best.

Sounds like a paradox. But it's really the poorest tire that keeps the car rolling. If it falls flat, the other three can't handle the job.

When one old tread-bare casing gives out, you can't put the car on crutches or stick a roller skate under one corner.



New tires for civilians are still hard to get.

Meantime, the rubber on your vehicle is steadily erasing itself.

There's a wear going on.



You can't stop wear but you can do something to retard it.

When a tire has strained every fibre of its being, it may be too late to salvage it.

Save the carcass and you save all.

Have tires recapped in time. A re-cap is a form of old age retirement.

It gives the tire a new lease on life, so it can spend its declining miles in active service.



To help save the carcass have all tires inspected regularly.

Shell Dealers and Shell Service Station people will be glad to look the situation over for you. They'll take care of proper pressure, rotation, checking valve cores and other necessary attentions.

Drive in at the Sign of the Shell and give your priceless tires some real post wear service.

—BUD LANDIS

A community park estimated to cost \$50,000 is being planned by the City of Needles. Federal funds together with a \$10,000 contribution from the Santa Fe railroad and \$10,000 from the local school district, will finance the main part of the proposed recreation program.

Preservation of the old military fort at Paiute springs in San Bernardino county is promised by Mr. and Mrs. George Irwin of Essex, California, who recently have purchased the 160-acre homestead where the ruins are located, from T. W. Van Slyke.

For Nice Things . . .

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THE HEART OF ANTELOPE VALLEY
RILLA CUSTER GALEN CUSTER

The Desert Trading Post

Classified advertising in this section costs five cents a word, \$1.00 minimum per issue—
Actually about 1½ cents per thousand readers.

MISCELLANEOUS

Large stock of petrified palm. Twenty tons of rock specimens. Navajo rugs, reservation hand hammered silver and baskets from many tribes. Many other handmade artifacts. Daniels Indian Trading Post, 401 West Foot-hill Blvd., Fontana, Calif.

WHATEVER YOUR WHIMS! REALIZE YOUR INNERMOST LONGINGS! Get "Spiritual Help For Your Everyday Problems." Unique book, complete collection, intimate, SURE solutions. Only 25c postpaid. OUTSTANDING BOOK ASSOCIATION, Box 2501, Los Angeles, Calif.

Desert Tea: In original form. Large bundle only \$1.00 complete with instructions for use. Mail orders taken for government stamped Navajo rugs and blankets, Indian pottery, desert pets, rocks and antiques. Grail Fuller's Bor X Post Ranch, Box 26, Daggett, California.

Gold Dust and Nuggets Really Pay Off! Proven methods, simple home made equipment. For a profitable hobby or fortune making profession, read "Gold Prospecting Made Easy." Only 50c postpaid. Imperial Gold, 208 Del-mar, Vallejo, California.

Wanted: Man or couple who like the desert for steady position on chicken ranch near Bar-stow, feeding. About 8000. Cabin with utili-ties furnished. Salary depends on man. Ad-dress Box 26, Daggett, Calif.

Finish High School at home in spare time study. All textbooks furnished. Diploma upon completion. For complete information write H.S. Dept., Box 537, Phoenix, Arizona.

Three hunting preserves where only bow and arrow can be used are proposed in a bill introduced in the California legis-lature.

New bus service operating between the communities of Palm Springs, Garnet, Desert Hot Springs and Cathedral City, operating daily except Sunday has been inaugurated by the Tanner Motor Tours.

NEVADA

Would Protect Game Fish . . .

BOULDER CITY—Plans for seining the carp in Lake Mead and, converting them into fertilizer have been disclosed by local men who plan to finance a plant for processing the fish. The Boulder sportsmen's club has approved the plan, asserting that carp and other scavenger fish are enroaching on bass and other game fish in the lake. Nets 1600 feet long, with a capacity for from 10 to 20 tons of fish are to be used. Bass and other game fish will be net dipped from the larger nets and returned to the lake.

Nevada's 1945 wool crop will be bought by the United States government at ceiling prices approximately the same as for the previous year.

Body not Recovered . . .

LAS VEGAS—Search was started for the body of Raymond Spilsbury, former general manager of mining properties in Peru, when his clothes containing \$13,000 were found on the bank of the Colorado near Eldorado. He had gone there to keep a fishing date with Murl Emory, pioneer boatman, and when the latter was delayed, the mining man walked along the shore, and was not seen again. The search was directed by Chief Ranger Don Jolley of the national park service.

Would Sell Liquor to Indians . . .

CARSON CITY—For the second time in two years, legislation has been intro-duced giving Indians the same right as other Americans in the matter of buying liquor. Assemblyman Don C. Crawford's bill would prohibit the sale to Indians between midnight and 8:00 a.m., and ap-peal all acts in conflict therewith. A similar bill introduced by Crawford two years ago died in committee.

December travel over Boulder dam amounted to 17,300 passengers in 5,376 cars, compared with 14,386 passengers in 4,344 cars in December 1943, according to figures released by the park service.

NEW MEXICO

War on Mesquite . . .

TUCUMCARI—Using a newly-de-signed machine which cuts the roots deep below the surface, lands heavily forested with mesquite are now being cleared of the trees at less than \$10 an acre according to a report of U. S. Bureau of Reclamation men. Through the use of the new equip-ment it is reported that several thousand acres of land scheduled to be put in pro-duction in 1945 will be available as plan-ned. The machine, developed in Texas, is reported to carry a cutter blade eight feet six inches wide so deep below the surface that the remaining roots do not sprout.

Record Timber Production . . .

SANTA FE—New Mexico's seven na-tional forests yielded 41,678,000 board feet of lumber, mostly ponderosa pine, during 1944, according to the report of Lyle F. Watts, chief of the Forest Service. Total U. S. timber production in 1944 was 3,300,000,000 feet, the largest cut since the Forest service was founded 40 years ago.

Carlsbad caverns were visited by 122, 467 people during 1944, of whom 40,184 were members of the armed forces, accord-ing to the report of Superintendent Thomas Boles. This was less than half the visitors recorded in 1941, peak year at the caverns.

LIVESTOCK

NAVAJO RUGS: Large, medium and saddle blankets. Authentic Navajo and Zuñi jewelry. Famous Lorenzo Hubbell Co. rugs, Hopi pot-tery and baskets. Hubbell's Indian Trading Post, Tom Hubbell, 2331 Pico, Santa Monica, Calif. Phone 50603.

Want reliable desert developer to pioneer desert recreational development. Extensive acreage available on Salt Creek, Riverside county, nineteen miles from railroad and Salton Sea. Historical and interesting region. Owner, 425 Fifteenth Ave., San Francisco 18, Calif.

KARAKULS. Producers of Persian Lamb fur are easy to raise and adapted to the desert which is their native home. For further in-formation write Addis Kelley, 4637 E. 52 Place, Maywood, California.

We sell Nationally Recognized Fur Producing Karakuls. Have permanent market for wool and furs. Attractive investment for rancher or city investor. James Yoakam, National Distributor, 1128 No. Hill Ave., Pasadena, California.

REAL ESTATE

For Imperial Valley Farms—

W. E. HANCOCK

"The Farm Land Man"

Since 1914

EL CENTRO — — — CALIFORNIA

Arrested When Chant Ends . . .

GALLUP—When officers went to arrest Slocum Chah's wife for participating in an attack on District Supervisor Rudy Sweifel, they found Denet Tsosie, Navajo Medicine man in the fifth day of a nine-day chant for the woman. They waited until the chant was ended before making the arrest. Slocum Chah's wife was one of nearly a score of Navajo charged with assaulting the officer when he came to enforce the federal sheep reduction program. The Chah family had been ordered to reduce its flock by 87 sheep, and according to the report of officials, at first agreed to do so. Later there was a change of mind, and the trouble followed.

Free Hunting for Old-Timers . . .

SANTA FE—Free hunting and fishing licenses would be granted to all pioneer residents of New Mexico over the age of 65 under a bill introduced by State Representative Peter Gonzales of Las Vegas. "These old people have given their best to New Mexico," said Gonzales, "and it would be a bit of appreciation to let them fish and hunt for nothing."

. . .

Paul Goulding of Deming took top honors in the bareback bronc riding event at the 1945 National Western Stock Show rodeo held in Denver in January. Bill Linderman of Red Lodge, Montana, was announced champion of the saddle bronc contest. Toots Mansfield of Bandera, Texas, won the calf-roping and Claude Morris of Moorhead, Oklahoma, won the steer wrestling.

. . .

Rumors are current that John Collier is to resign as commissioner of Indian affairs in the department of interior, and that William A. Brophy of Albuquerque is to be the new appointee.

UTAH

Ute Land Sale Approved . . .

WASHINGTON—Approval has been given a senate measure authorizing the disposal of 220,000 acres of Utah land held in account for the Ute Indians. The bill provides that 61,000 acres shall be restored to the Ouray and Uintah reservations, and the Indians compensated for the remaining 159,000 acres acquired by the federal government for livestock purposes. Provision is also made for the Utes to sue for lands taken from them without compensation under an unratified treaty.

Would Repeal Polygamy Laws . . .

SALT LAKE CITY—Petitions urging the 1945 legislature to submit for popular vote a constitutional amendment repealing the ban on polygamy in this state have been received from leaders of the "Fundamentalist" cult. Sponsors of the petition assert that Utah was required to abolish polygamy as a condition of statehood, but that the supreme court has established the right of states to change conditions imposed upon them as a requirement for statehood.

. . .

Utah plans to participate during 1945 in nation-wide observance of the 140th anniversary of the Lewis and Clark expedition.

Lands Restored to State . . .

SALT LAKE CITY—By order of the department of interior in Washington, the 3,000,000-acre withdrawal of lands in southeastern Utah has been reduced to 200,000 acres. The land is in the vicinity of Thompson where the bureau of mines has been sinking exploratory wells to test underground deposits for magnesium and potash. Secretary Ickes has not yet made public the report on his desk as to the extent of the mineral deposits.

A WESTERN THRILL

"Courage," a remarkable oil painting 20x60 feet, the Covered Wagon Train crossing the desert in '68. Over a year in painting. On display (free) at Knott's Berry Place where the Boysenberry was introduced to the world and famous for fried chicken dinners with luscious Boysenberry pie.

You'll want (1) A 4-color picture of this huge painting suitable for framing. (2) A 36-page handsomely illustrated souvenir, pictures and original drawings, of Ghost Town Village and story of this roadside stand which grew to a \$600,000 annual business. (3) One year's subscription (6 numbers) to our illustrated bi-monthly magazine of the West. True tales of the days of gold, achievements of westerners today and courageous thoughts for days to come. Mention this paper and enclose one dollar for all three and get authentic western facts. Postpaid.

GHOST TOWN NEWS
BUENA PARK, CALIF.

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For Reservations — Write 29 Palms Inn at
TWENTYNINE PALMS, CALIFORNIA
or call any Travel Bureau or Automobile Club



Southern Pacific

Mines and Mining . .

Washington, D. C. . . .

According to unofficial estimates from the War Production Board, new capital equipment for gold mining probably will not be available until late in 1946. It was stated, however, that when mining can be resumed assistance probably will be given in the rehabilitation of gold mines closed by government order.

Kingman, Arizona . . .

After a long career of starts and stops, the Tennessee mine is again producing under a contract with the Tennessee Schuylkill corporation. A good grade of zinc-lead is said to be coming from the 700-foot level. Bob Payne, general superintendent, is heading a crew which is operating the mine on a cooperative basis, each man having a share in the output.

Death Valley, California . . .

New Sutherland Divide Mining Company located at Shoshone on the rim of Death Valley is reported to be shipping a carload of 40 to 50 tons of gold-silver-lead daily. Operations so far have been limited to the Sheba and Carbonate mines, the Sheba having a 385-foot tunnel.

Lovelock, Nevada . . .

It is reported that the U. S. Bureau of Mines has budgeted \$50,000 for diamond drilling and surveys at the Hamilton fluorspar mine situated in Black canyon in the Humboldt range. The owners of the property are R. T. Hamilton and associates of Oakland. Engineers have expressed the opinion that this deposit may be one of the most important discoveries of acid grade fluorspar in recent years and Senator Pat McCarran was instrumental in obtaining government funds for the exploration.

Goldfield, Nevada . . .

Proposed changes in Nevada mining law, would eliminate the necessity of filing claim locations with the district mining recorder. Wayne McLeod, state surveyor general, explained that the office of district mining recorder was established in the early days when lack of roads and transportation often made it difficult to go to the county seat for recording. The need no longer exists, he stated, and much confusion will be avoided if the county seat becomes a sole recording office for mine locations.

Sante Fe, New Mexico . . .

Mineral production in New Mexico during 1944 amounted to \$48,824,297, with copper heading the list and potash second, according to State Mines Inspector Warren Bracewell. The total was a decrease of \$1,233,017 from the 1943 record. Coal production for the year totalled 1,753,500 tons.

Globe, Arizona . . .

Believed to be one of the most important zinc discoveries in Arizona, the Irene mine $2\frac{1}{2}$ miles north of Globe is being diamond-drilled by the American Smelting and Refining company. Drilling has revealed a 28-foot vein of sulphide ore 700 feet below the surface which runs 12 per cent zinc. The Irene already has produced a considerable tonnage of lead and some silver.

Westgate, Nevada . . .

Gold crystals have been found in petrified cypress logs at Nigger Wells in southeastern Nevada, according to Vincent Gianella, professor of geology in Mackay school of mines. Gold in crystal form is a rare occurrence. The quantity of precious metal found in the petrified wood was so slight as to make recovery impracticable for commercial purposes, it was stated.

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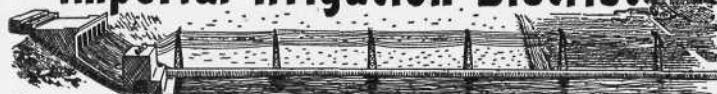
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Imperial Irrigation District



Use Your Own Power—Make it Pay for the All American Canal

GEMS AND MINERALS

ARTHUR L. EATON, Editor

CHRIS WICHT ESTATE BOUGHT BY TRONA CLUB

Searles Lake gem and mineral society at Trona was high bidder for the Chris Wicht estate at the entrance to Surprise canyon, and it will be maintained, according to President George Pipkin as a memorial to the beloved pioneer miner. The property includes house, swimming pool, cabins and garden. The club plans to install a barbecue pit, employ a caretaker and maintain the property for use of the members.

A busy year is planned by the Trona club. Aside from regular meetings and field trips the following annual events are in prospect: '49er party in January; Death Valley field trip, April; Telescope peak climb, June; Barbecue at Chris Wicht memorial, July 4; Pot luck dinner, August; hobby show, October; Christmas party, December.

February 11 field trip was a daylight trek to Last Chance canyon southwest of Randsburg where the members found petrified wood, honey opal, Jasper and some fire opal. Harvey Eastman is field trip chairman.

COMMON OPAL

Common opal, especially the Mexican variety often appears in bright natural colors, such as all shades of red, yellow, orange, etc. These colored varieties, as well as all varieties of precious and fire opal, are usually lacking in the powers to fluoresce. But to those interested chiefly in this phenomenon, the very commonest types of common opal make up for all the deficiencies of their richer relatives. Pale yellows, blues, translucent to opaque whites, and other pieces, almost too poor to notice, blossom out under the cold quartz lamp in a glorious golden yellow, second to nothing else in existence. These pieces can often be found wherever opal exists.

DIOPTASE AS EMERALD

Diopase is an emerald green, hydrous silicate of copper. Gem quality is very rare, although the African mines produce a common type in large amounts, and on a commercial basis. The tiny prismatic crystals, brilliant and transparent, are found occasionally in the copper mines of southern Arizona. These crystals are always too small to cut singly, but I have noticed many of them mounted in their natural shape, small and slender, in the place of emeralds for rings and pins to set off larger stones of other colors.

It is estimated that seven or eight percent of the earth's crust is aluminum, the most abundant of all metals. Two or three percent is magnesium. These two light metals are fast becoming of utmost importance in structural uses. Last year U. S. produced 2,100,000,000 pounds of aluminum and 44,000,000 pounds of magnesium.

Collecting vs Gathering . . .

Most of us have heard one version or another of the story of how Mr. and Mrs. Newly Rich, wishing to create a false impression of culture, built an elaborate library in their new mansion, and filled it with books, real or "reasonable facsimiles thereof", though in reality neither of them had ever read any book. Now and then we find an individual of this type among the collectors of minerals. He owns a large collection of choice specimens, some of which cost considerable sums of money, but none of which he collected personally. He introduces the visitor to his collection with a magnificent, even lordly gesture, but melts like a June frost if asked a question about any specimen which cannot be answered by reading off the label. Such an individual is not a collector and is far from being entitled to call himself a "rockhound." He is just a gatherer who enjoys possession only, and is blind to all else. After the old man with the long beard, the hourglass and scythe has passed his way, there's often a bargain for the real lover of minerals. So, after all, perhaps Mr. Gatherer did accomplish something.

Rockhound Record
(Mineralogical Society of Arizona)

Leland Quick, conductor of the "Amateur Gem Cutter" section in Desert Magazine spoke of amateur gem cutting before the Southwest Optimists club of Los Angeles, California, on January 24 and the Rotary club of Redondo Beach, California, on January 31. The talks were accompanied by exhibitions of his lapidary work.

Pebbles is the title of a pamphlet issued by Snohomish county mineral society for its annual banquet.

Snohomish county mineral society, Everett, Washington, announces the following officers for 1945: Wm. G. DeFeyer, president; Peter Krogh, vice-president; Harry E. Bonner, 3413 Grand avenue, secretary-treasurer; Joe Swarts, Chas. Krogh, Earl Williams, Paul Sorenson, directors. Paul Grabner is past president. Meetings are held second Mondays. An attendance of 72 at the annual banquet shows that the Snohomish club maintains its interest in rocks and minerals even though field trips are out for the present.

Records from mines and deep wells show a temperature increase of one degree Fahrenheit for every 60 feet of depth. Rate begins to diminish below depth of a few miles, but pressure increases. This pressure apparently is sufficient to keep rocks from becoming fluid even if temperature is high enough to melt them.

RARE QUALITY CUT STONES . . .

Fine brilliant cut Zircons, blue, \$6 carat. Emerald cut Zircons, blue and white, \$4 carat. Ceylon native Zircons \$1 carat.

Aquamarines, 12x14 and 12x16 m/m \$2 carat, also large sizes.

Rare blue precious Topaz and Golden Ceylon Quartz Topaz, fine color \$1 carat.

Carved Moonstones. Black Star Sapphires \$2 carat. Black Onyx drops \$3 pair.

Brilliant cut Montana Sapphires, also blue and golden.

Dozen Moss Agates, brooch size, \$12. Dozen Ceylon Garnets \$6.

Rare Hessonite and Green Garnets.

Finest Chrysocolla cabochons in the world, \$15 per 100 carats.

Rare and unusual stone cameos, 14 karat ladies gold mountings, \$60 dozen.

Synthetic Alexandrites, \$2 carat.

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Herkimer, Pecos diamonds, 10 for \$1.00. Large collection of crystallized and fluorescent minerals at 25c each. Order your bargain surprise package today. Monroe Mineral Store, Monroe, N. Y.

50 ring stones, including genuine and synthetic—\$7.50. 12 genuine Opals or Cameos—\$2.75. Plus 20% tax. B. Lowe, Box 311, St. Louis 1, Mo.

NEW FIND: Agatized Dinosaur Bone. Fine cutting quality. Cells filled with blending colors, red, brown and clear. Makes beautiful cabochons and transparencies. Cutters, get yours now, while it lasts, \$1.50 per lb. Specimen stuff 50c. Postpaid. Bill Little, Hesperus, Colorado.

Montana Moss Agates in the rough for gem cutting, \$1.00 per lb. plus postage. Elliott's Gem Shop, 26 Jergins Arcade, Long Beach 2, Calif.

Antique Jewelry: 12 articles antique jewelry, brooches, rings, lockets, chains, etc. \$3.60. 12 assorted hatpins—\$3.00. 12 stickpins \$2.75. B. Lowe, Box 311, St. Louis 1, Mo.

Swisher's rocks, minerals and petrified woods. Island corals, shells, shell costume jewelry, fine copper minerals from Bisbee, Arizona. Fine quartz crystals from Arkansas. Also fine line of Art Figurines. Swisher's, 5254 So. Broadway, Los Angeles 37, California.

Jewelry stones removed from rings, etc. 100 assorted \$2.40. B. Lowe, Box 311, St. Louis 1, Missouri.

\$2.50 brings you prepaid six rare and beautiful crystallized Arizona minerals. Vanadinite, Diopside, Wulfenite, Willemite, Chrysocolla, Azurite. Specimens 1 1/2 x 2 or larger. Wiener Mineral Co., Box 509, Tucson, Arizona.

Choice Palm Root—Full of eyes showing root and trunk structure. Very colorful. Sliced for Cabochons. 25 cents per square inch. Satisfaction guaranteed. GASKILL, 400 North Muscatel, San Gabriel, Calif.

INDIAN RELICS, Curios, Coins, Minerals, Books, Old Buttons, Old Glass, Old West Photos, Weapons, Catalog 5c. Lemley Antique Store, Osborne, Kansas.

Wanted: to buy, sell and exchange specimens outstandingly rare and beautiful. Sam Parker, 2160 East Van Buren, Phoenix, Ariz.

FOR SALE—Gem Aquamarine, specimen beryl. Large star quartz pieces, 7 pound crystal of Brazil rutile, terminated, semi plume. Moss and sagenite agate. 6 inch sphere of variegated jasper, Montana sapphires and garnets up to ten carat gems uncut. The Desert Rats Nest, 2667 E. Colorado St., E. Pasadena, Calif.

AGATE JEWELRY AND OREGON AGATES—Ladies 10k gold rings, pointed or oval type, \$14.40 including excise tax. We make pendant necklaces, brooches, rings of several types. Sell plume and other agate by the slab. We guarantee satisfaction or will refund your money upon receipt of our merchandise. See that funds accompany your order. E. Lee Sigfrith, 211 Congress, Bend, Ore.

Send me 3 lbs. of good grade agate or ?? and I will cut you one large heart or 2 large cabochons, you pay postage. R. H. Justice, 343 West 87 St., Los Angeles 3, Calif.

ATTENTION ROCK CUTTERS—Chrysocolla cabochon blanks 25c, exceptionally fine green jade 35c and 50c, flower obsidian 15c and 25c, Crawfordite 25c, Rhodinite 15c, petrified wood, shows distinct grain, generous specimen 50c. De Morrienne & Charles, 420 N. La Cienega Blvd., Los Angeles 36, Calif.

Specials this month. Rare Seam Agate, showing moss, black, green, dentic. Superb cabochon material, most all of it fluoresces a beautiful green. \$1.00 per lb. A local find of smoky quartz crystals, real dark, looks like amethyst, fine specimens 50c to \$10.00. Extra good Thunder Eggs from the Little Mule mountains, pretty centers, many geodes 2 to 3 inches 50c each, polished halves 65c. Gorgeous quartz crystal clusters from Little Rock, Ark., from \$1.00 to \$100.00. Choice Barite roses from Oklahoma 1 to 3 in. at 25c, 50c, 75c. Choice geodes from all locations \$1.00 to \$10.00. Cash with orders, postage extra. No shipments for less than \$2.00. Clark's Hobby House, Route No. 1, Box 26, Fallbrook, Calif.

Let me make up your favorite cabochon cut stones into jewelry that is different. Each piece individually designed to suit the stone; hand wrought in Sterling silver; no "castings." Money refunded if not pleased. Women's rings \$3.00, men's rings \$4.00, bracelets \$6.00 to \$12.00, pendants \$4.00. THE SILVERSMITH (New Location), R.R. 2, Box 268, Santa Fe, New Mexico.

CYANITE—Beautiful specimens, long blue and blue-green crystals in white quartz matrix, from Connecticut. ACTINOLITE—Very attractive dark green crystals with creamy white talc, from Vermont. EASTONITE with serpentine from Pennsylvania. TREMOLITE—Glassy crystals in snow white limestone, from Connecticut. NORBERGITE—In white limestone, found in only two localities in the world, from Franklin, N. J. WILLEMITE with Calcite, Franklinite, Zincite, etc. (Fluorescent), from Franklin, N. J., 2x2 in. to 3x5 in. and priced at 50c to \$3.00 each. Parcels post or express extra. H. STILLWELL & SON, Rockville Centre, N. Y.

Mineral Sets—24 Colorful Minerals (identified) in 1x1 compartments—Postage paid, \$3.50. Prospector's Set of 50 minerals (identified) in 1x1 compartments in cloth reinforced sturdy cartons, Postage paid \$5.75. Elliott Gem Shop, 26 Jergins Arcade, Long Beach 2, Calif.

Moss or Fern Opal: Makes beautiful cabochons or cabinet specimens. \$1.00 per lb., plus 20% tax, Calif. residents 2 1/2% state tax. Write for our list of minerals. A. L. Jarvis, Rt. 2, Box 350, Watsonville, Calif., 3 mi. So. of Watsonville on State Highway No. 1.

Beautiful Black Satin Spar, masses of small Selenite crystals give these specimens a satin luster that changes to a silver sheen when specimen is turned or moved. 1 large specimen \$3.00. To Cutters—Snow Flake Obsidian nodules, 1/2 nodule \$1.50, whole nodule \$2.50, a real gem material. 6 Colorado Beauties, assorted, \$6.00, a large assortment of 2x2 specimens \$6.00, order both for \$10.00. Actinolite in quartz \$1.50, 12 prehistoric lizard scales \$2.00, Horneblend crystals in Diorite \$2.00, no fractures. Jack the Rockhound, P. O. Box 86, Carbondale, Colo.

Souvenirs of Goldfield, Nevada's great mining camp. Real Gold, Silver, Copper, Lead, Talc, Zinc, Chalk and many interesting and instructive formations. Valuable aids to prospectors. Generous samples 35c, 3 for \$1.00, 18 for \$5.00. Larger sizes 50c to \$2.50, includes many fluorescent minerals. Fluorescent petrified wood. Glass, Cinnabar in Opalite and Opal. Gold and silver mines in Nevada located for a very small fee. Write if interested to W. Dart, Goldfield, Nevada.

Rock Collectors Attention! 1 only Iceland spar showing several double movable bubbles, size 2 5/8 x 1 3/8 in. Price \$100.00; 1 only, Utah Cerussite XL group, size 7x5x4 in., very showy \$50.00; 1 spec. Ariz. Vanadinite XLS. on rock 16x6x2 in. \$25.00; 2 only purple Fluorite Phantom XL groups, 1 is size 6x7x2 1/2 in., other 11x4 1/2 x 4 1/2 in. Very choice \$35.00 each. The Rockologist (Chuckawalla Slim), Garvey Trailer Park, 941 E. Garvey Blvd., Garvey 32P, Calif.

Something new—Beautiful colored brecciated banded agate, brecciations revealed with clear chalcedony. Also petrified palm root in clear chalcedony. \$1.00 per lb. or 25c per sq. in. A few cabinet specimens \$5.00 up. E. H. Peebles, 401 W. Garvalia, San Gabriel, Calif. Phone AT-12764.

Opals—Cut and polished cabochons. Fine stones in several colors \$1.00 to \$50.00 each. Special price for this month on Zircons, facet cut, mounted in solid gold ladies or men's rings. Unmounted loose stones sold very reasonable. Write for prices to W. Dart, Goldfield, Nevada.

Minerals: Spending a few months in the desert collecting specimens for myself. I have a quantity of fine large showy duplicates for sale. If interested write. K. O. Otoupalik, 916 Fremont St., Las Vegas, Nevada.

Good cutting material, Petrified Wood, Agate, Jasper, \$1.00 per lb. Special mixed lots \$4.00 for 5 lbs. Variscite specimen material \$1.00 per lb. and up. Geodes and Ribbon Rock, 5 lbs. for \$1.00. Please include postage. John L. James, Tonopah, Nevada.

Rocky Moore Collection Sold. Have on consignment another collection of 350 specimens, all different, 1 to 4 inches, price \$75.00. A. V. Herr, Assayer Chemist, 5176 Hollywood Blvd., Hollywood 27, Calif.

The Rockhound Colony Grows: Plan to visit the only Gem Colony in America. Look us over and if you like us and we like you—join us and help make this colony something we'll all be proud to belong to. We have sold 25 lots to date to some of the best dealers and collectors in the fraternity. Lots 100x300 ft. \$150. We will not be able to do lapidary work until further notice. We still do silver work and sell gem material, cabinet specimens, minerals, books, cut stones and silver jewelry. Write for particulars. The Colorado Gem Co., Bayfield, Colo.

AMONG THE ROCK HUNTERS

R. J. Sampson talked on minerals of San Bernardino county at January 16 meeting of Pacific mineral society.

Mineralogical society of Salt Lake City, Utah, meets first Tuesdays in the geology buildings of University of Utah.

West Coast mineral society held its January 9 meeting at home of secretary Lee Seabridge 240 Orange Street, Norwalk, California.

W. Stuart Cramer talked on rise, evolution and fall of the trilobite at January 6 meeting of Marquette geologists association, Chicago. Dr. Ball continued his instructive geology-study-course lectures.

War production board announces that an adequate supply of industrial diamonds for essential uses is assured for the first half of 1945 through an accord with the British ministry of supply. Certain types are reported scarce.

Dr. Vard H. Johnson has presented a collection of opalized wood to Brigham Young university, Utah. The wood came from near Mountain City, Nevada and contains specimens of ancient redwoods which may have been the ancestral stock of present day big trees. Dr. Johnson, who served two years with the Army in the Aleutians, has also given the university geological specimens peculiar to that region.

John M. Grieger of Warner and Grieger is at present with armed forces in Honolulu.

A new lapidary society was organized at the home of Russell Grube, San Jose, California, on January 28. Any amateur in Santa Clara county or nearby counties is welcome to join and details can be secured from Mr. Grube by addressing him at P. O. Box 124, San Jose. Grube was a charter member of the Los Angeles Lapidary society.

Cogitations . . .

Of a Rockhound

By LOUISE EATON

Letsa rockhouns built rock gardens when field trippin was possible. Pritty an' not too good rox went in aroun cactus an' succulents. Now when no new rox has come in for a long time sum uv thos not-so-good specimens looks almost like cuttin material. Just about evrything in this world goes by comparison, an' rox wheather good or bad is n oxception.

Letsa a desert flowerz 'll be born to blush unseem 'n waste their fragrants this spring becus rains on the colorado desert have been unusually plentiful and well spaced. Ocotillo has worn leaves since last fall and bloomed constantly.

Mama rockhouns always feels young in their hearts. So it sorta surprizes 'n shocks um to look in a mirror n see wrinkles in their faces 'n their heads gettin gray.

C. H. Abbe and George Valdez were in charge of January 18-20 mineral show put on by San Benito mineral association, Hollister, California. Exhibition featured San Benito county minerals but included specimens from many other districts.

Mother Lode mineral society, Modesto, California elected the following December 15; A. J. McMeekin, president; Edna Matheron, vice-president; Mae McKibben, secretary; W. P. Weston and Fayne Rinehart, trustees.

Long Beach mineralogical society has purchased two \$50 war bonds and also has substantial sum in the treasury. Jay Wilson of 1208 W. 6th St., Corona, has been named secretary following the resignation of Sam Christensen.

San Fernando mineral and gem society opened its year with a hobby show. Members displayed their varied collections of paintings, woods, fans, carvings, gems, etc. J. L. Micksell, Wm. Taylor, Payton Randolph, George McPheeters entertained the group with short talks on copper, quartz, feldspar and lapidary work.

Dr. V. E. Larrick told of a trip to the Colorado river country at January 4 meeting of Orange Belt mineralogical society. Lester Cary showed colored pictures taken in Painted desert. Petrified forest, Grand Canyon, also various scenes from New Mexico and Arizona.

Ralph Slight told Los Angeles lapidary society at January 8 meeting about various types of marble found in different parts of the world. A motion picture showing all steps in quarrying and preparing marble illustrated his talk. Archie Michaeljohn, Fred Rugg, Rosenburg, McCornack, Mitchell and others are committee in charge of forthcoming L. A. lapidary society exhibit.

Los Angeles mineralogical society presented a purse of fifty dollars to patients at Rancho Los Amigos as a Christmas gift.

Ernest Chapman gave an illustrated lecture on a field trip to old Mexico at January 8 meeting of mineralogical society of Southern California. Members displayed their south of the border specimens to add interest to the meeting.

Los Angeles mineralogical society plans to sponsor study of mineralogy in the city schools. A committee has been working three months on methods. They hope to experiment with a 7B class, using a set of fifty minerals in a course to cover ten weeks, an hour of instruction each school day. Club members will assist by being ready to visit the class on request, talk to the pupils and exhibit specimens.

Professor Daniel T. O'Connell was scheduled to give a Kodachrome-illustrated talk on geological glimpses of the national parks at January 2 meeting of New Jersey mineralogical society, Plainfield, New Jersey.

Within short distances of Plainfield are located some of the best mineralogical museums in the world. Secretary G. R. Stillwell urges members to visit Philadelphia academy of natural sciences, Princeton university museum, Rutgers university museum, Patterson museum, New York museum of natural history, Columbia, Yale and Harvard museums. President Joseph D'Agostino suggests that each member make a special effort to invite menegeralogsits, geologists, gemologists of the area to attend meetings.

Seattle Gem Collectors' club heard Dr. Combs of the University of Washington give a lecture on "Cave Pearls" at the January dinner meeting in the chamber of commerce building. The program included showing of pictures of the latest eruption of Mt. Vesuvius.

Louise Worden, Los Angeles teacher, gives elementary instruction in rocks and minerals to her fourth grade pupils. She reports that about two in every thirty become ardent rockhounds.

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3"	7c	15 ft.	6.90	5 lbs.
8"	17c	7 ft.	18.00	12 lbs.
10"	22c	6 ft.	22.00	15 lbs.
12"	25c	5 ft.	26.50	20 lbs.

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LOS ANGELES, CALIF.

J. C. Mathes, of Dow chemical company, of Midland, Michigan, stated recently at a meeting of the American society of mechanical engineers, that wings, constructed entirely of magnesium, have been in use on certain kinds of American airplanes for a year or two. Thirty or forty sets of these magnesium wings on planes at naval training stations have proven quite satisfactory.

Collectors in Ventura, California, have formed a mineral club of 20 active members. Mrs. P. M. Woodside is president, E. G. Kempton, vice president; Francis Herter, 60 Lincoln Drive, secretary. Club rooms at 60 Lincoln Drive are open the 2nd and 4th Saturdays and visiting rockhounds are invited to call.

Searles Lake gem and mineral society, Trona, California, reports the following officers elected for 1945: George Pipkin, president; Ralph Merrill, vice-president; Diane Adler, secretary; Harvey Eastman, treasurer; J. Phil Lonsdale, Chet Edwards, Ceacel Wittorff, Ann Pipkin, Virgil Trotter, directors. Ralph Merrill is also editor of Searles Lake mineral news.

Members of the Desert gem and mineral society at Blythe, California, have asked Riverside county supervisors to take steps to protect desert wells, springs and waterholes, and to have the watering places in the desert properly signposted.

At the January 18 meeting, 102 members and guests of the Mineralogical Society of Arizona at Phoenix were entertained with colored movies entitled "Permanente Magnesium, the Magic Metal for War and Peace." This picture, filmed by the Permanente Metals corporation, was projected by the YMCA Men's club of Phoenix. On display at the meeting was the Colorado Mineral society's traveling exhibit, which is reported to be unusually fine.

Scheduled for the February meetings of the East Bay mineral society at Oakland was the showing of J. Lewis Renton's pictures of "Minerals in Thin Sections," and a lecture on micro-mineral mounts by George H. Needham, president of the Northern California mineral society.

The mineralogy division of the Southeast Hobby society announces a program for March 27 with colored slides on Conchology and Mineralogy by A. E. Allard, chairman of the mineralogy division. Dr. Clinton Hubbard, conchology chairman, will describe the shells as shown in the slides. A. E. Allard offers a very unusual program in colored mineral slides. Fluorescent minerals will be shown in their natural color on the screen and right-before-your-eyes, the same mineral will gradually fluoresce without having made any apparent change in position or background. Many other minerals will also be shown in their natural color on the screen, accompanied by a brief non-technical description by Mrs. A. E. Allard. C. L. Matteson, in charge of the mineral exhibits, promises many beautiful displays of minerals, gem stones, shells, and fossils. Those interested are invited to attend. Program starts 8 p. m. at Southeast Y.M.C.A., 3365 E. Gage, Huntington Park, California.

Northern California mineral society elected the following officers for 1945: George H. Needham, president; J. Lewis Renton, vice-president; Harriet Thompson, secretary and hostess; C. Waltermire, treasurer; Bernice V. Smith, curator; Ella Schumacher, librarian; Louis Eddy, Bert Walker, William Munich Jr., directors. The society held its annual banquet January 21 at Del Mar restaurant in San Francisco. Each member took a favorite specimen. Mr. Vonson of Petaluma donated a prize for the most interesting two minute account of how a specimen was obtained.

Mineralogical Society of Utah at Salt Lake has elected the following officers for 1945: Junius J. Hayes, president; Mrs. Marie Crane, vice-president; W. T. Rogers, 2nd vice-president; Forace Green, secretary; Mrs. Lillian Lockerbie, treasurer; Sears P. Roach, historian.

Almost a hundred members and guests attended the January meeting of the Los Angeles mineralogical society and heard Dr. Gordon B. Oakeshott, instructor in earth sciences at Compton junior college, give a fine talk on the "Geology and Mineralogy of the San Fernando Quadrangle and the Western San Gabriel Mountains." Many fine geodes were displayed by "Benny" Benedict and others and door prizes awarded. A book raffle was held and the response indicated that this was a welcome innovation that might bear repeating. Chuck Jordan brought over a considerable quantity of minerals which seemed to meet with favor—there were a lot less of them to take back. The continued influx of new members and the re-awakening interest of more and more older members has made it necessary to arrange with Boos Brothers for more room in which to operate.

Stevens T. Norvell discussing igneous rocks in the January bulletin of the Marquette geologists association in Chicago, points out that the same granitic magma will produce four different types of rock according to the rate of cooling. Slow cooling deep within the earth makes granite. Rhyolite results from somewhat more rapid cooling. Under such rapid cooling as would result if the mass were to flow out on the surface of the earth, the magma produces felsite. If the exit of molten mass is into an ocean or lake the extreme rapidity with which it cools produces obsidian in different forms.

Eva Wilson entertained Imperial Valley gem and mineral society with a talk on desert wild flowers at February 3 meeting. She illustrated her discussion with her exquisite pictures made of pressed flowers mounted under glass. Meeting was held at home of Mr. and Mrs. Allen Mains, Calexico.

ANSWERS TO TRUE OR FALSE

Questions are on page 28

- 1—True
- 2—False. Carlsbad caverns are in New Mexico.
- 3—True.
- 4—True.
- 5—False. Carson City is the capital of Nevada.
- 6—True.
- 7—False. Volcanic craters sometimes are found in the level plain country.
- 8—True.
- 9—False. The Snake Dance is a Hopi ceremonial in Arizona.
- 10—True. 11—True. 12—True.
- 13—False. The flower of the Palo Verde is yellow.
- 14—False. Ocotillo belongs to a genus of its own, *Fouquieria splendens*.
- 15—False. Manly was a member of the Jayhawker party that took the southern route from Utah to California.
- 16—False. The Mormon Battalion was part of General Kearny's Army of the West.
- 17—True.
- 18—False. Bronze is an alloy of copper and tin.
- 19—True.
- 20—False. Asbestos is mined from the ground.

AMATEUR GEM CUTTER

and polishing equipment. Leland Quick, who conducts this department, is former president of Los Angeles Lapidary society. He will be glad to answer questions in connection with your lapidary work. Queries should be addressed to Desert Magazine, El Centro, Calif.

By LELANDE QUICK

Probably no material ever has confounded amateur lapidaries more than the Wyoming jade. Folks who have been used to good results with "California jade," and other materials sold as jade because of a loose use of the term, find that they get poor results with the real material when they use the same lapidary treatment.

Mrs. E. A. Williams of Elkhart, Indiana, is the latest correspondent to cry for help with the familiar complaint of "lemon peel" finish. I have had no experience with the Wyoming jade myself as the results I got with Burma jade discouraged me and I have been unable to procure green jade of a color that satisfied me. I see no sense in processing black jade if I want a black stone when "black onyx" is so easily available if you have a spare pound of sugar and a few surplus agates—and who hasn't?

But since authorities have identified the Wyoming black jade as being probably the finest black nephrite ever found I consulted a man who has much of it, if not more, than anyone. "Chuck" Jordan, the popular Los Angeles dealer, has made hundreds and hundreds of cabochons of the Wyoming jade with a perfect finish. When I asked him for information for Desert Magazine readers he said, "Sure, I'll tell you how I do it. I got a lot of tips from Mr. Rhodes of Lander, Wyoming, and I combined them with my ideas and as the result of long experiment I evolved a process for turning out a perfectly polished stone. Speed is the secret, just as it is with Rhodonite. I turn my sanders up to 2000 RPM. I use a fairly new No. 220 cloth (after doing a couple of agates on it) and then I finish lightly on a well-worn sander. Then I thoroughly wet a hard leather buff that has very little padding, saturate it with tin oxide and let the wheel get almost dry. I also turn it up to 2000 RPM and barely touch the jade to the buff. The result is perfect."

Jade is peculiar material to work with. It possesses an indefinable something that most amateurs refer to as "tough". I suppose it could stand such unorthodox treatment as dry buffs that run at 2000 RPM. An agate would crack under the treatment quicker than Churchill could say "unconditional surrender" but then we all do so many agates that we unconsciously give all stones the same lapidary procedure. I do know that high speed is the answer to difficulties with Rhodonite and I can well understand that it is probably the solution to jade. But I wonder how fast the Chinese artisan polishes with his crude foot-powered machinery—and who can approach him in the quality of his jade finish? At any rate, Jordan does fine

jade work and you might try his ideas and report to me, for I haven't the jade and I have no buff such as he uses.

H. H. Meigs of Sacramento, California, a frequent correspondent, has had the trouble that comes to every amateur at one time or another. He has fine scratches on some moss opal that defy every treatment and wants to know what to do. I can't answer that one but maybe some reader can. My theory is that it's just bad luck and I put it away and wait for the luck to change. Meigs wants to know if the cerium oxide would work and is worth the money and I would say off-hand that it probably would work and it is worth the money. I have had just such occasions with opals when the more I sanded the more scratches I saw and then I tried some cerium oxide and whoosh!—they were gone. I do think that grit in the air can get on your felt and leather buffs and put in new scratches as fast as you grind out the old ones and if I had constant trouble with several kinds of material I would be suspicious of that and do something about it. I keep all my buffs in large paper bags. I used to keep them covered with rubber bathing caps. Those were the days!

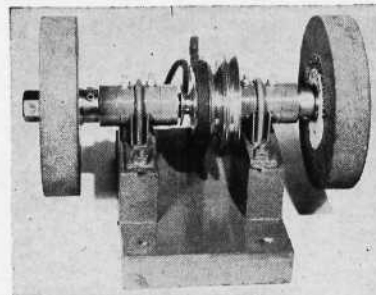
Desert Magazine gets out to the boys in the Pacific and they have been reading the information I gave in November about shell cat eyes. Long and interesting letters have reached me from Francis Pugh and C. W. Fitch giving accounts of finding the shells all over the area between Australia and the Philippines but they contribute nothing new on the lapidary angle except that tooth powder is a good polishing agent for them. Some day I'm going to try tooth powder on a felt buff and see what it does. After all it's cheaper by the pound than cerium oxide. I do wish that some of the boys in the Pacific area who read this would remember me with some of the cat eyes. I'd be glad to polish and forward some to some service man's kin in exchange for a nice batch. I prefer the green ones and of course if I receive some blue ones—well!

Recognizing the cultural accomplishments of the Los Angeles Lapidary society in the shows given in past years, the facilities of the Los Angeles County Museum of Art and Science in Exposition Park, Los Angeles, have been offered for this year's exhibition which probably will open on Saturday, May 12 with a two day open house with members in attendance. It is expected that at least 150 separate exhibits containing 25,000 gems will be on display to the general public for a period of two months. This recognition is deserved and it fulfills a long personal ambition to have the amateur lapidary art received and take company with sculpture and painting under the same roof. Amateur lapidary work at least has been lifted out of the hobby class and placed on a pedestal with the other arts where it rightfully belongs and where it was centuries ago. It is hoped that those exhibiting will realize this and display only the best, the very best, of their gem work for the idea is on trial and it would be a bitter disillusionment if it failed. The two day show heretofore attracted about 6000 people each year but now several times that number will have an opportunity to witness the entire show over the two month period. This will be a great event. Do plan to attend.

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Arbor holes 1/2, 5/8, 3/4, 1 in.

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By RANDALL HENDERSON

IF UNCLE SAM accepts my five dollars and puts his stamp of approval on the application papers I filled out, I will soon be the proud possessor of one of those 5-acre jackrabbit homesteads we've been writing about in *Desert Magazine*.

I am not sure whether my lizard farm is located on the top of a rocky peak, or on the side of a steep canyon or down in a sandy wash. It may take a half a ton of TNT to blast out a level spot big enough for a 10x12 cabin. But for better or for worse, my name is in the pot and I am about to become a member of that growing fraternity of white collar workers who aspire to own a little weekend shack out on the desert.

It all came about this way: On a recent visit to the Los Angeles land office I learned that a certain Section 36 and other lands along the foothills at the toe of California's Santa Rosa mountains on the south side of Coachella valley had been classified as available for five-acre homestead leases.

And so I went out to look over this Section 36. Many of the other *Desert* readers have been filing on these five-acre government tracts, so why not me?

With my friend Wilson McKenny, I spent a day and a half tramping over rocks and bucking catsclaw and mescal, trying to find a suitable location for a desert cabin. The only thing Mac and I were real sure about at the end of our exploring was that the U. S. Land Department had been 100% truthful when it announced that these 5-acre tracts were not to be considered a source of livelihood. If there is a patch of terrain in Section 36 level enough and fertile enough to grow a mess of beans, Mac and I never found it.

But you cannot expect too much when you get a piece of land 330x660 feet for \$5.00. And so Mac and I and some of our friends filed anyway—sort of sight unseen.

The uncertainty about this business of taking up jackrabbit homesteads is that there are no markers to indicate where one five acres ends and the next one starts. At some time in the distant past, government surveyors put in section corners, and they are still there—if you can find them. But no one has ever staked out the 5-acre claims.

The formula for locating a jackrabbit farm is to comb the desert over until you find a government corner within a reasonable distance, say a mile or two, of the section in which your future desert mansion is to be located. Then look at your watch and take a slant at the sun, and decide which way is north or east, or whatever direction you want to go. Then start pacing off the distance—three feet to a step. And if you have made a perfect guess as to compass direction and every pace is exactly three feet long, eventually you will come to the spot where you want to be.

There are likely to be two or three young mountain ranges along the route, so you have to make allowance for the short steps going up hill, and the skidding you do on the way down.

And when you come face to face with a boulder as big as a house you have to do a little "offset surveying" to get around that.

It was apparent to Mac and me after an hour or so of this squint-at-the-sun method of surveying that there was a sizable chance for error. So we put our heads together and figured out a fool-proof formula. He was to go around a quarter section one way and I was to go the other. And if we met at the right spot, everything was okay.

It was a good idea—but we failed to allow for the fact that Mac's legs are about four inches longer than mine. Also we didn't know the sun was going to disappear behind a cloud about the time we were making our right angle turns. And when we reached the end of our beats, we were a quarter of a mile apart. In fact there was a small mountain range between us, and by the time we had found each other we had lost all idea of where those section lines were supposed to be.

So we just gave it up and went in and filed our applications, and when we came down to the question, "Have you examined the land?" we could truthfully say "yes" for I am sure there isn't a butte or a ravine in that whole section we haven't inspected.

And we still don't know whether our jackrabbit farms will be on a knob so high and windy it will take anchor chains to hold down the cabin, or in the path of every cloudburst that comes down a wash. But we got \$5.00 worth of fun and fresh desert air out of the adventure.

Out of my own experience I can pass along a couple of tips for those who sooner or later will want to become jackrabbit homesteaders. Take along a good compass and a chain or steel tape—for there are 128 five-acre farms in a section of land, and there may not be a U. S. survey post within a half mile of the cactus patch which you decide should be in your front yard.

And don't be afraid that the "good homesteads" will all be gone before you can save enough gas coupons to go out and locate your future desert homesite. It is the policy of the Land Office to open additional public lands for this purpose as they are needed. In fact, I have a letter from the Commissioner of the U. S. Land office in Washington stating that is exactly what they are going to do. And I have a hunch some of the future subdivisions will include more desirable lands than have yet been offered to 5-acre applicants. Public land all over the West will be available for these homesites as there is a demand for it.

No doubt surveys will be made later establishing corners for the 5-acre divisions—but not while there is need for every available man at the front or in the war production plants.

In the meantime, hunting a government section corner in a wild rocky terrain is almost as much fun as hunting a lost gold mine—and probably just as profitable. And the suspense of waiting to see whether your grab-bag adventure in real estate got you a granite sidehill with a streak of quartz down the middle, or a friendly family of lizards in a sand dune has its intrigu-

ing aspects. There probably isn't any gold in the quartz, or garnets in the sandhill. But they cannot put you in jail for dreaming about such things. And it sort of takes your mind off the tragic side of the war.

* * *

More than once, on these pages, I have suggested that if the leaders in big business, big labor, big politics and big government, could be persuaded to go out and make their decisions in the tranquil environment of a remote desert canyon or mountain-top, the problems of civilization would not be so troublesome.

And now there are two of us who hold that view. Stuart Chase, economist writing for the Twentieth Century Fund, has just produced the fourth in his series titled *After the War Ends*. In his new book, *Democracy Under Pressure*, he suggests this approach to the problems of America:

"I see perhaps a hundred leading Americans, men and women, meeting in some high quiet place . . . They are not the kind of people who are active in Me First groups. They are scientists, judges, teachers, university people, philosophers of business, lovers of the land, statesmen; and they think in terms of the whole community.

"I picture them as people without ideologies or dogmatic principles, aware of their own shortcomings and the general inadequacy of mankind, as Wells puts it. They are accustomed to approach a question with the scientific attitude, and to look at all the major characteristics of a situation before leaping to a conclusion. They are aware of the pitfalls of language. Supermen, if you like, but if there are not a hundred of them in the country today, America is in a bad way. We had more than that in 1787.

"They ought, I think, go up into the mountains somewhere. Perhaps the Navy would invite them to Sun Valley, whose beauty and remoteness would give them perspective. The young veterans recuperating there would remind them of the urgency of their task. They could look at the Sawtooth mountains of Idaho, blocking the sky to the north, and remember the majesty and splendor of their country."

The chairman is speaking . . .

"We who are meeting here, I take it, represent no economic interest except that of the consumer, which means everybody. We are not specifically for 'labor,' for 'capital,' for farmers, for organized medicine, for Wall street, the West Coast, the export trade, the department stores, or for the manufacturers of Shocking Radiance perfume."

"We are not in favor of 'capitalism,' 'socialism,' 'fascism,' 'communism,' 'individualism,' or saving the world by the introduction of planned parenthood. We have gone through these vague ideologies and come out on the other side . . ."

"We want to find out which monopolies can be successfully broken up into competitive units, and which cannot be without disaster . . . we want to determine how far labor unions should be regulated in the public interest, and whether the Wagner act needs amendment. We are sure, I think, that union accounts, like corporate accounts, should be a matter of public record . . ."

"We have come here, I take it, because we believe our democracy can find the brains. If anyone in this room does not believe that a managed economy is compatible with political democracy and civil liberties, some mistake has been made in the invitations. That is one assumption we are all supposed to make. We do not have to assume its eternal truth, but without it as a working hypothesis we can do little here but toss a dilapidated ball of argument around the same old dusty circle. We assume that our democracy *can* manage its affairs, and we have met to prepare a temporary plan of management . . ."

"Preachers have long admonished us that all men are brothers, but they got nowhere in an era of scarcity where there was not enough to go around. Brothers sat on brothers' heads. The power age has given material foundation to the preachers' case. For the first time in history there is no need for brothers to push one another down. Look at the United States in 1944, producing

twice what it did in 1940. The economy of abundance makes the class struggle as old-fashioned as a high-wheeled bicycle . . ."

"Full employment or progressive degeneration is the choice we apparently must make, the price we have to pay for fecundity of the machine. The enemies of society are not the rich who spend their money on luxuries, but those who restrict production and won't let other people work. These enemies are found in the monopolies of both business and labor. The pressure groups are crawling with them . . ."

"None of us belongs to pressure groups, but some of us have pet ideas. I implore you to drop them if they stand in the way of agreement. It isn't you who must be vindicated, but your country. Broader still, it is democracy which must be vindicated."

"We are sick and tired of hearing it said we can never get anywhere because our government is so rotten—meaning in a democracy that *we* are rotten. We are sick and tired of running around in circles, wringing our hands because we can produce so much. That is a game for people in a mental hospital, not for civilized men. The war has interrupted the game, but if we let things drift the mental cases will come back."

"The question before us here is not whether there shall be government interference in the economy. That question was settled in the affirmative by the first administration of George Washington, when customs tariffs were enacted. The question before us is what *kind* of government interference? Will it be to subsidize powerful pressure groups, or to keep all America strong?"

That is the setting, and the approach with which Stuart Chase would tackle the post-war problems of USA—and it all makes good sense to me. And if Idaho's Sun Valley happens to be snowed in with a winter blizzard on the date when the scientists and teachers and business men and statesmen are called together for their conference, I can suggest any number of secluded coves and rock-rimmed plateaus out here on the desert of the Southwest, where the sun will be shining and Nature's handiwork will provide a perfect stage for such a meeting.

* * *

Writing from Twentynine Palms where he is wintering A. W. Gabbey of Wyoming says: "National Parks and Monuments are usually promoted by a bunch of ambitious people who first have the concession privileges tied up and in their vest pocket." (See Letters Page.)

That statement is so unworthy, I cannot believe that Mr. Gabbey meant what he wrote. It is inconceivable that a man could live for long amid the beauty of the Jenny Lake landscape in Wyoming, and have so little faith in his heart.

We have Grand Canyon, Yellowstone, Crater Lake, Yosemite, the California Redwoods and a hundred other glorious parks and monuments in the West—they belong to you and me because of the courageous fight waged by far-seeing American men and women to preserve those areas against private greed. And no bitter words spoken by Mr. Gabbey can detract from the esteem in which the most of us hold those fearless pioneers of park system.

* * *

I'll be going out in a few days to see if the desert lilies have popped their first green sprouts through the sand. I have no reports from elsewhere, but there is the promise of many wildflowers on the Colorado desert of Southern California. The purple blossoms of the locoweed are plentiful along U. S. Highway 99 west of Salton Sea, and the golden blossom of encelia may be seen occasionally. There have been several light winter showers in this area, and ocotillo and burroweed are in leaf and the sands are carpeted with green sprouts. It is never quite safe to make predictions regarding Nature's wildflower parade this early in the season, for hot winds in February can do much damage, but if the winds hold off we will have better than an average wildflower display.



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